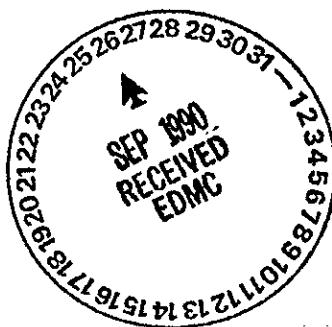


0010816

WHC-EP-0342
Addendum 13

222-S Laboratory Wastewater Stream- Specific Report



Prepared for the U.S. Department of Energy
Office of Environmental Restoration
and Waste Management



**Westinghouse
Hanford Company** Richland, Washington

Hanford Operations and Engineering Contractor for the
U.S. Department of Energy under Contract DE-AC06-87RL10930

Approved for Public Release

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or any third party's use or the results of such use of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

This report has been reproduced from the best available copy.
Available in paper copy and microfiche.

The U.S. Department of Energy and its contractors can obtain copies of this report from:

Office of Scientific and Technical Information
P.O. Box 62
Oak Ridge, TN 37831
(615) 576-8401

This report is publicly available from:
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650

Printed in the United States of America

DISCLM-1.CHP (7-90)

START

0010816
192

WHC-EP-0342
Addendum 13

222-S Laboratory Wastewater Stream- Specific Report



Prepared for the U.S. Department of Energy
Office of Environmental Restoration
and Waste Management



**Westinghouse
Hanford Company** Richland, Washington

Hanford Operations and Engineering Contractor for the
U.S. Department of Energy under Contract DE-AC06-87RL10930

Approved for Public Release

**THIS PAGE INTENTIONALLY
LEFT BLANK**

222-S Laboratory Wastewater Stream-Specific Report

M. J. Hall

Date Published
August 1990

Prepared for the U.S. Department of Energy
Office of Environmental Restoration
and Waste Management



**Westinghouse
Hanford Company** P.O. Box 1970
Richland, Washington 99352

Hanford Operations and Engineering Contractor for the
U.S. Department of Energy under Contract DE-AC06-87RL10930

Approved for Public Release

**THIS PAGE INTENTIONALLY
LEFT BLANK**

**222-S LABORATORY WASTEWATER
STREAM-SPECIFIC REPORT**

M. J. Hall

ABSTRACT

The proposed wastestream designation for the 222-S Laboratory wastestream is that this stream is not a dangerous waste, pursuant to the Washington (State) Administration Code (WAC) 173-303, Dangerous Waste Regulations. A combination of process knowledge and sampling data was used to make this determination.*

*Ecology, 1989, *Dangerous Waste Regulations*, Washington (State) Administrative Code (WAC) 173-303, Washington State Department of Ecology, Olympia, Washington.

This page intentionally left blank.

EXECUTIVE SUMMARY

The proposed designation for the 222-S Laboratory wastestream located in the 200 West Area is that the stream is not a dangerous waste, pursuant to the Washington (State) Administrative Code (WAC) 173-303, *Dangerous Waste Regulations*.* A combination of process and sampling data was used to determine if the effluent contains a listed dangerous waste (WAC 173-303-080). Sampling data alone is compared to the dangerous waste criteria (WAC 173-303-100) and dangerous waste characteristics (WAC 173-303-090). The basis for the sampling data was 4 samples taken from the 207-SL Retention Basin between October 9, 1989, and March 21, 1990.

*Ecology, 1989, *Dangerous Waste Regulations*, Washington (State) Administrative Code (WAC) 173-303, Washington State Department of Ecology, Olympia, Washington.

This page intentionally left blank.

LIST OF TERMS

BAT	Best Available Technology
BDL	below detection limits
CERCLA	<i>Comprehensive Environmental Response Compensation and Liability Act</i>
DCG	Derived Concentration Guides
DOE	U.S. Department of Energy
DWC	dangerous waste constituents
DWS	Drinking Water Standards
EC	equivalent concentration
Ecology	Washington State Department of Ecology
EP	extraction procedures
EPA	U.S. Environmental Protection Agency
FY	fiscal year
GC/MS	gas chromatography/mass spectrometry
HH	halogenated hydrocarbons
IARC	International Agency for Research on Cancer
MCL	maximum concentration limits
MSDS	Material Safety Data Sheet
PAH	polycyclic aromatic hydrocarbons
PCL	Process Control Laboratories
PUREX	Plutonium-Uranium Extraction
REDOX	Reduction-Oxidation
SARA	Superfund Amendments and Reauthorization Act
SC	specific carcinogen
TC	total concentration
TDS	total dissolved solids
TEDS	Treated Effluent Disposal System
U90%CI	upper limit 90% confidence interval
WAC	Washington (State) Administrative Code

This page intentionally left blank.

CONTENTS

1.0	INTRODUCTION	1-1
1.1	BACKGROUND	1-1
1.2	APPROACH	1-1
1.3	SCOPE	1-4
2.0	PROCESS DATA	2-1
2.1	PHYSICAL LAYOUT	2-1
2.1.1	222-S Laboratory	2-1
2.1.2	219-S Waste Treatment Building	2-4
2.1.3	291-S Exhaust Fan Control House and Stack	2-5
2.1.4	222-SA Analytical Chemical Standards Laboratory	2-5
2.1.5	207-SL Retention Basin	2-5
2.1.6	216-S-26 Crib	2-6
2.2	CONTRIBUTORS	2-6
2.2.1	Process Chemicals	2-6
2.2.2	Laboratory Chemical Stocks	2-8
2.2.3	Maintenance Chemicals	2-9
2.2.4	Janitorial Supplies and Aerosols	2-9
2.2.5	Radionuclides	2-9
2.3	PROCESS DESCRIPTION	2-9
2.3.1	Present Activities	2-9
2.3.2	Past Activities	2-10
2.3.3	Future Activities	2-10
2.4	PROCESS DATA	2-11
3.0	SAMPLING DATA	3-1
3.1	DATA SOURCE	3-1
3.1.1	Wastestream Data	3-1
3.1.2	Background Data	3-4
3.2	DATA PRESENTATION	3-4
4.0	DATA OVERVIEW	4-1
4.1	DATA COMPARISON	4-1
4.2.1	Chemical	4-4
4.2.2	Radiological	4-4
4.2	STREAM DEPOSITION RATES	4-4
5.0	DESIGNATION	5-1
5.1	DANGEROUS WASTE LISTS	5-1
5.1.1	Discarded Chemical Products	5-1
5.1.2	Dangerous Waste Sources	5-3
5.2	LISTED WASTE DATA CONSIDERATIONS	5-3
5.2.1	Process Evaluation	5-3
5.2.2	Sampling Data	5-4
5.3	PROPOSED LISTED WASTE DESIGNATION	5-5
5.3.1	Discarded Chemical Products	5-5
5.3.2	Dangerous Waste Sources	5-11

CONTENTS (continued)

5.4 DANGEROUS WASTE CRITERIA	5-12
5.4.1 Toxic Dangerous Wastes	5-12
5.4.2 Persistent Dangerous Wastes	5-13
5.4.3 Carcinogenic Dangerous Wastes	5-14
5.5 DANGEROUS WASTE CHARACTERISTICS	5-14
5.5.1 Ignitability	5-14
5.5.2 Corrosivity	5-15
5.5.3 Reactivity	5-15
5.5.4 Extraction Procedure Toxicity	5-15
5.6 PROPOSED DESIGNATION	5-15
6.0 ACTION PLAN	6-1
6.1 FUTURE SAMPLING	6-1
6.2 TECHNICAL ISSUES	6-1
7.0 REFERENCES	7-1

APPENDIXES:

A Process Chemicals, Chemical Stocks, Maintenance Chemicals and Janitorial Supplies and Aerosols	A-1
B Sample Data	B-1

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

LIST OF FIGURES

1-1 Characterization Strategy	1-3
1-2 Location of the 222-S Control Laboratory at the Hanford Site . .	1-5
1-3 The 222-S Laboratory and Associated Facilities	1-6
2-1 222-S Laboratory Wastewater System	2-2
2-2 222-S Laboratory Coolant and Condensate Flow Diagram	2-3
5-1 Illustration of the Designation Procedure	5-2

LIST OF TABLES

1-1 Stream-Specific Report Reference List	1-2
3-1 Procedures for 222-S Laboratory Wastewater Samples	3-2
3-2 Contract Laboratory Analytical Information Sheet	3-5
3-3 Chemical Data Summary	3-8
4-1 Comparison of Sampling Data and Process Data	4-2
4-2 Evaluation of 222-S Laboratory Wastewater	4-3
4-3 Comparison of Detected Sample Data with Detected Background Data	4-5
4-4 Comparison Ratios that Exceed 1.0	4-6
4-5 Deposition Rate for 222-S Laboratory Wastewater	4-7
5-1 Inorganic Chemistry for the 222-S Laboratory Wastewater	5-6
5-2 Dangerous Waste Designation Report for 222-S Laboratory Wastewater	5-8

This page intentionally left blank.

**222-S LABORATORY WASTEWATER
STREAM-SPECIFIC REPORT**

1.0 INTRODUCTION

1.1 BACKGROUND

In response to the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1989), comments were received from the public regarding reduction of the discharge of liquid effluents into the soil column. As a result, the U.S. Department of Energy (DOE), with the concurrence of the Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA), committed to assess the contaminant migration potential of liquid discharges at the Hanford Site (Lawrence 1989).

This assessment is described in the *Liquid Effluent Study Project Plan* (WHC 1990a), a portion of which characterizes 33 liquid effluent streams. This characterization consists of integrating the following elements, pursuant to the Washington Administrative Code (WAC) 173-303 (Ecology 1989): process data, sampling data, and dangerous waste regulations.

The results of the characterization study are documented in 33 separate reports, one report per wastestream. The complete list of stream-specific reports appears in Table 1-1.

1.2 APPROACH

This report characterizes the 222-S Control Laboratory, 222-SA Analytical Chemical Standards Laboratory, and 291-S Exhaust Fan Control House and Stack wastestreams in sufficient detail so that a dangerous waste designation, in accordance with WAC 173-303-070, can be proposed and so that an assessment of the relative effluent priorities, with regard to the need for treatment and alternative disposal practices can be made.

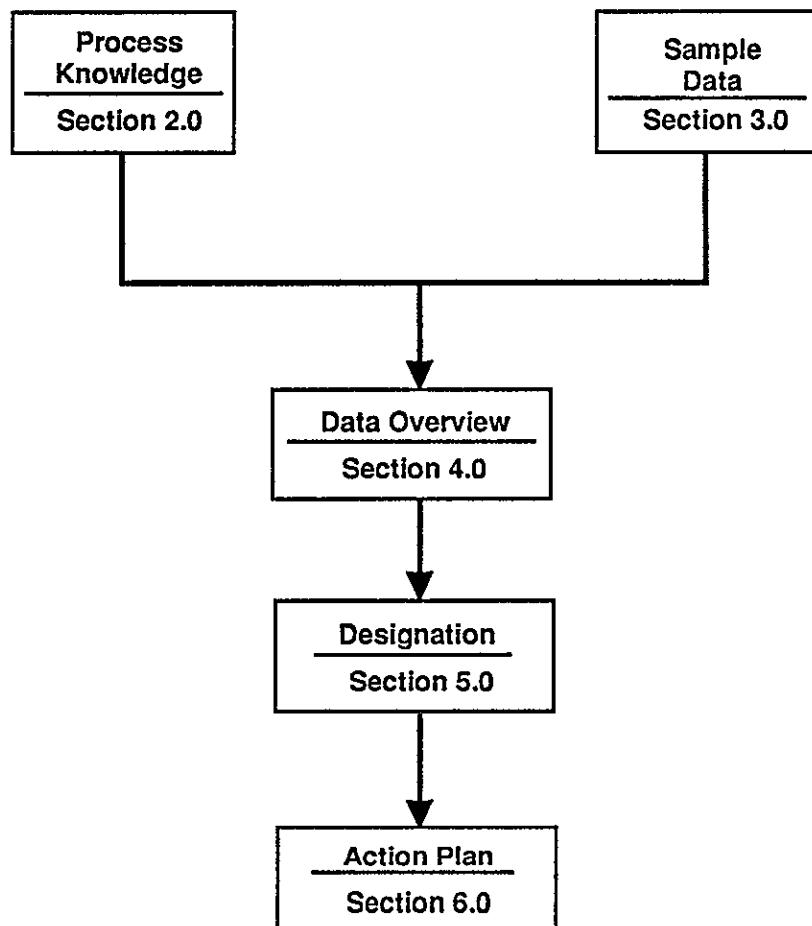
The characterization strategy (shown in Figure 1-1) is implemented by means of the following steps.

1. Describe both process and sampling data (Sections 2.0 and 3.0, respectively).
2. Integrate the data (Section 4.0).

Table 1-1. Stream-Specific Report Reference List.

WHC-EP-0342 Addendum 1	300 Area Process Wastewater
WHC-EP-0342 Addendum 2	PUREX Plant Chemical Sewer
WHC-EP-0342 Addendum 3	N Reactor Effluent
WHC-EP-0342 Addendum 4	163-N Demineralizer Wastewater
WHC-EP-0342 Addendum 5	PUREX Plant Steam Condensate
WHC-EP-0342 Addendum 6	B Plant Chemical Sewer
WHC-EP-0342 Addendum 7	UO ₃ /U Plant Wastewater
WHC-EP-0342 Addendum 8	Plutonium Finishing Plant Wastewater
WHC-EP-0342 Addendum 9	REDOX Complex Wastewater
WHC-EP-0342 Addendum 10	T Plant Wastewater
WHC-EP-0342 Addendum 11	2724-W Laundry Wastewater
WHC-EP-0342 Addendum 12	PUREX Plant Process Condensate
WHC-EP-0342 Addendum 13	222-S Laboratory Wastewater
WHC-EP-0342 Addendum 14	PUREX Plant Ammonia Scrubber Condensate
WHC-EP-0342 Addendum 15	242-A Evaporator Process Condensate
WHC-EP-0342 Addendum 16	B Plant Steam Condensate
WHC-EP-0342 Addendum 17	B Plant Process Condensate
WHC-EP-0342 Addendum 18	2101-M Laboratory Wastewater
WHC-EP-0342 Addendum 19	UO ₃ Plant Process Condensate
WHC-EP-0342 Addendum 20	PUREX Plant Cooling Water
WHC-EP-0342 Addendum 21	242-A Evaporator Cooling Water
WHC-EP-0342 Addendum 22	B Plant Cooling Water
WHC-EP-0342 Addendum 23	241-A Tank Farm Cooling Water
WHC-EP-0342 Addendum 24	284-E Powerplant Cooling Water
WHC-EP-0342 Addendum 25	244-AR Vault Cooling Water
WHC-EP-0342 Addendum 26	242-A Evaporator Steam Condensate
WHC-EP-0342 Addendum 27	284-W Powerplant Wastewater
WHC-EP-0342 Addendum 28	400 Area Secondary Cooling Water
WHC-EP-0342 Addendum 29	242-S Evaporator Steam Condensate
WHC-EP-0342 Addendum 30	241-AY/AZ Tank Farms Steam Condensate
WHC-EP-0342 Addendum 31	209-E Laboratory Reflector Water
WHC-EP-0342 Addendum 32	T Plant Laboratory Wastewater
WHC-EP-0342 Addendum 33	183-D Filter Backwash Wastewater

Figure 1-1. Characterization Strategy.



29002020.8

3. Propose a designation (Section 5.0).
4. Design an action plan, if needed, to obtain additional characterization data (Section 6.0).

1.3 SCOPE

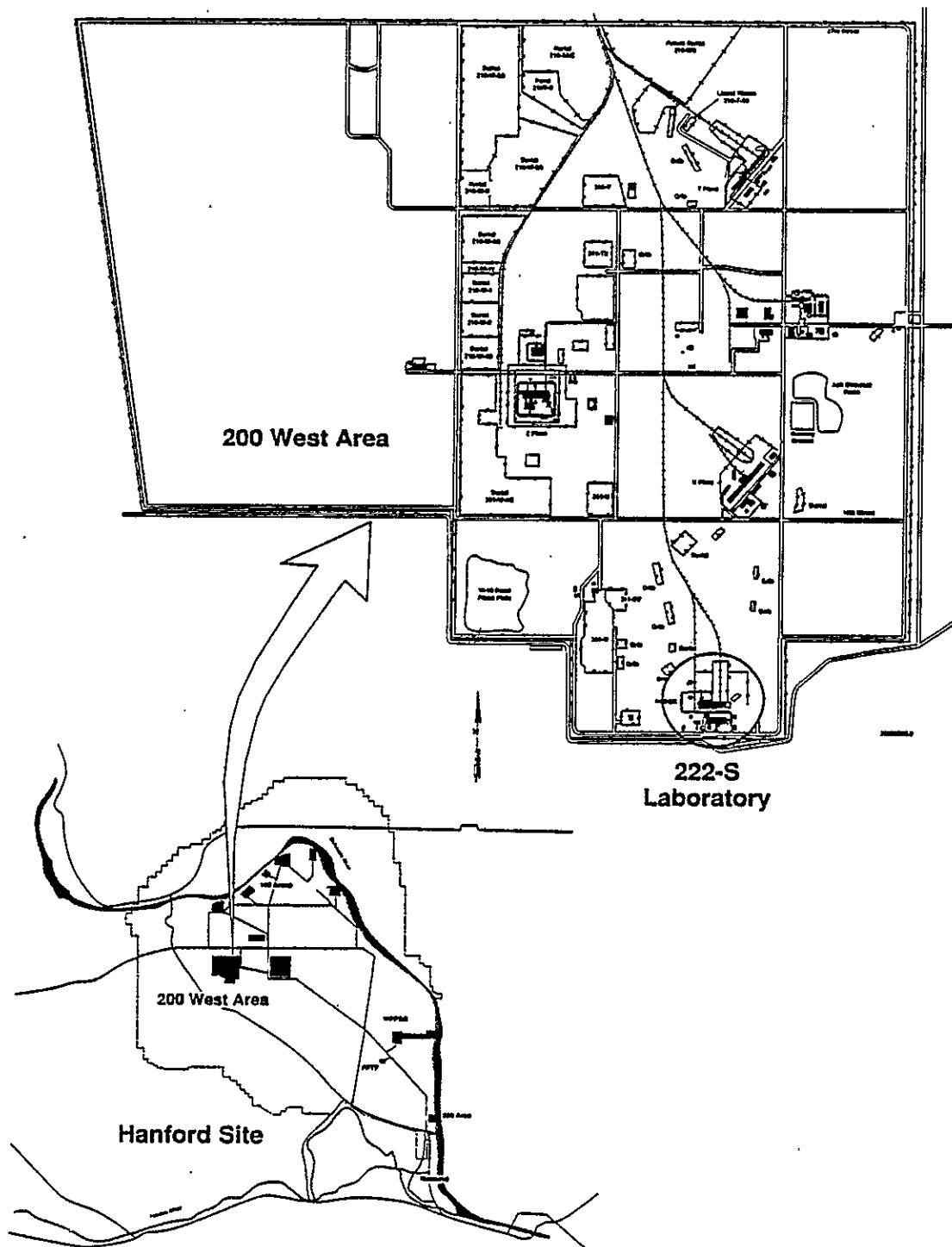
Although the primary focus of this report is the characterization (both process knowledge and sampling data) of the 222-S Laboratory wastewater, two additional wastestreams are evaluated (the 222-SA Laboratory wastewater and the 291-S Facility cooling water). The latter two wastestreams, however, are characterized based on process knowledge only.

This report does not address any other wastestreams of these facilities, such as solid, gaseous, radioactive or hazardous liquid or sanitary waste. Figure 1-2 shows the location of the 222-S Laboratory at the Hanford Site. Figure 1-3 shows the relationship between the 222-S Laboratory and associated facilities.

Historical changes, process campaign changes, and sampling data are considered only if relevant to the characterization of the wastestream as it presently exists. Both process and sampling data will be judged adequate when the normal process system fluctuations have been described in sufficient detail to predict present operation. Future configuration/process modifications are addressed only if they will significantly alter the present effluent.

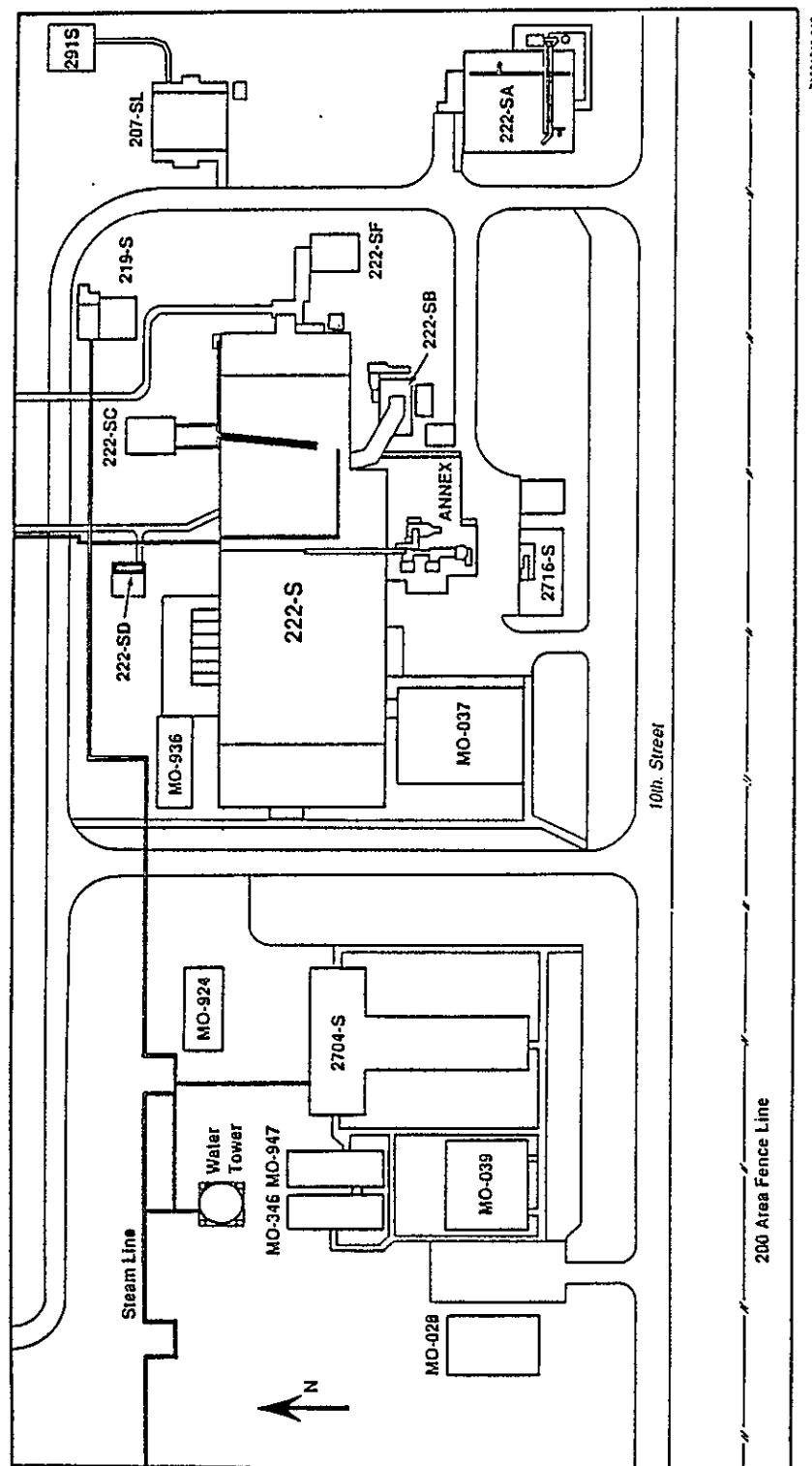
The sampling data, included as Appendix B-1, are from 4 samples taken from the 207-SL Retention Basin between October 1989 through March 1990. This data will be used for designation, and maximum contamination level (MCL) and derived concentration guide (DCG) comparisons. All sampling data, including sampling data obtained before October 1989, appears in Appendix B-2. The sampling data does not include the 222-SA Laboratory wastewater or 291-S Facility cooling water.

Figure 1-2. Location of the 222-S Control Laboratory at the Hanford Site.



WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Figure 1-3. The 222-S Laboratory and Associated Facilities.



2.0 PROCESS DATA

This section presents a qualitative and quantitative process knowledge-based characterization of the chemical and radiological constituents of the 222-S Laboratory, 222-SA Laboratory, and 291-S Facility wastestreams. These process data are discussed in terms of the following factors:

1. Location and physical layout of the process facility
2. A general description of the present, past, and future activities of the process
3. The identity of the wastestream contributors
4. The identity and concentration of the constituents of each contributor.

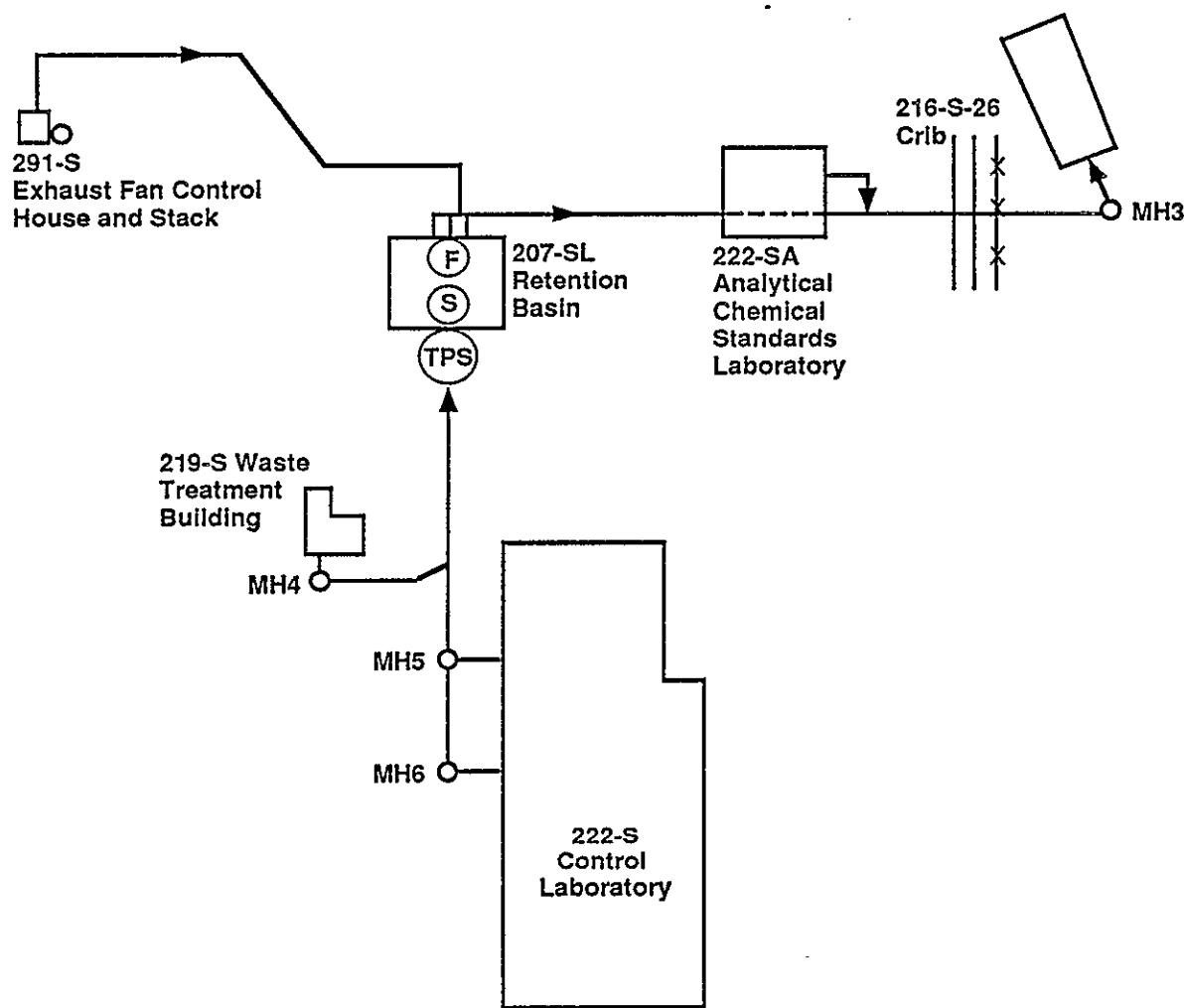
2.1 PHYSICAL LAYOUT

The 222-S Laboratory is located in the 200 West Area of the Hanford Site. Nonradioactive wastewater from this building and from the nearby 219-S Waste Treatment Building flows to two concrete retention compartments in the 207-SL Retention Basin, where it is accumulated and sampled before discharge. (Sanitary wastes are not part of this stream.) Wastewater meeting radioactive and chemical discharge specifications is routed from the 207-SL Basin to the 216-S-26 Crib, which is located southeast of the 222-S Laboratory, outside the 200 West exclusion area. Figure 2-1 shows the layout of the wastewater system. The 222-SA Laboratory and the 291-S Facility also contribute water to the 216-S-26 Crib. These streams, however, are not accumulated in the 207-SL Basin. Figure 2-2 shows a flow diagram of major sources of wastewater generated within the 222-S Laboratory.

2.1.1 222-S Laboratory

The 222-S Laboratory is a two-story building, 322 ft long and 107 ft wide. The first floor contains three general areas. The west area contains the lunchroom, offices, and locker rooms, which are maintained free of radioactivity and toxic chemicals. The central portion contains laboratories and service areas for work with low- to intermediate-level radioactivity or toxic materials, although an occasional high-level sample may be located in this area. The east area, commonly referred to as the Multicurie Section, contains laboratories, hot cells, and service areas for working with intermediate- to high-level radioactive samples. The central and east areas contain laboratory benches and hoods that are supplied with services such as electrical outlets, tap water, distilled water, propane, compressed air, and process vacuum.

Figure 2-1. 222-S Laboratory Wastewater System.



MH = Manhole

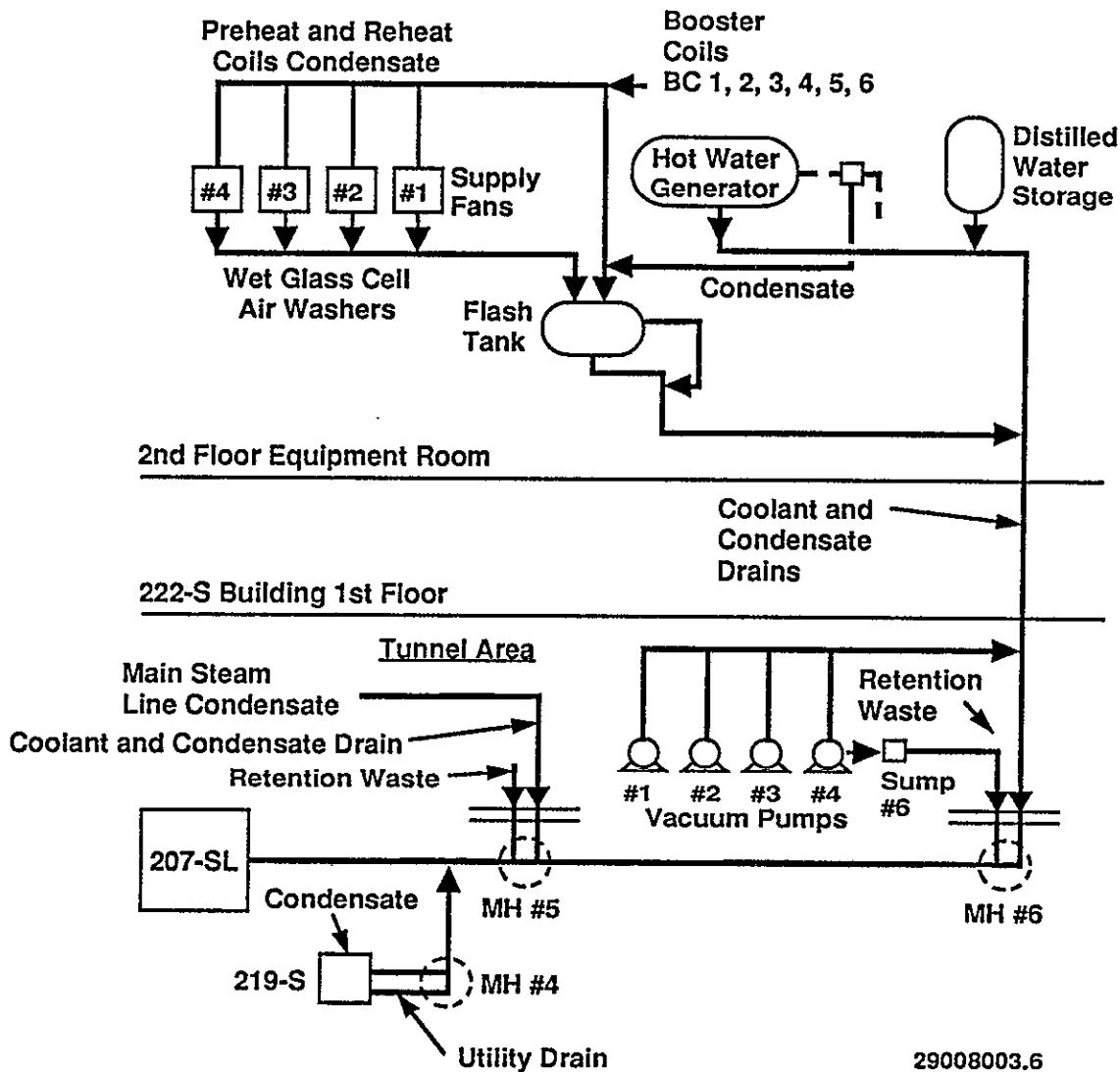
TPS = Time proportional sampler (Record)

(S) = Sampling location for SSR samples (grab samples)

(F) = Flow measurement location

299003038.43

Figure 2-2. 222-S Laboratory Coolant and Condensate Flow Diagram.



The supply water for 222-S Laboratory consists of raw and sanitary water and steam. The raw water is used in the fire sprinkler system and contributes less than 1% of the wastestream flow. Sanitary water is used as the primary supply water to the laboratory and contributes 85% to the wastestream flow. Steam condensate contributes the remaining 15% of the wastestream flow.

Radioactive effluents containing hazardous constituents are segregated from nonradioactive and nonhazardous effluents. All first floor laboratory sinks, hood drains, drinking water fountains, service sinks, bathroom sinks, distilled water supplies, equipment cooling water, and steam condensate from the low- to intermediate-level radioactive areas empty into the 207-SL Retention Basin. The laboratory sinks and hood drain from the Multicurie Section areas of the first floor also empty into the 207-SL Retention Basin.

The second floor contains the ventilation supply fans, supply and exhaust ductwork, the ventilation system operation and control room, a glass shop, and storage areas. This area is a radioactive surface contamination zone. The sinks and drains from the glass blowing shop on the second floor empty into the 207-SL Retention Basin. The second floor distilled water overflow and drain, the backwash and drain from the Millipore* deionized water unit, a floor drain near the unit, and the flash tank overflow and drain lines all empty into the 207-SL Retention Basin. Lines into the flash tank include cooling water from the supply fans, condensate from booster coils, and condensate from the reheat and preheat coils on supply fans (see Figure 2-2). Overflow and drain lines from the overhead nitric acid storage tank empty into the main nitric acid storage tank outside of the building.

The basement contains service piping, vacuum pumps, a counting room, an instrument maintenance shop, and a scanning electron microscope laboratory. This area is also a radioactive surface contamination zone. All effluent generated in the basement of the 222-S Laboratory is analyzed for radioactive contamination and, if below release criteria, is discharged to the 207-SL Retention Basin.

2.1.2 219-S Waste Treatment Building

The 219-S Building collects radioactive and radioactive mixed liquid waste generated by 222-S Laboratory operations. This facility consists of two below-grade vaults, called cells A and B; a 27-ft by 25-ft below-grade concrete vault, containing three stainless steel tanks; a 22-ft by 13-ft transit building; the pipe trench and operating gallery; and an attached concrete-walled sample gallery. Overflow and drain lines from the caustic tank (used for neutralizing radioactive wastes) are routed to the hot waste

*Millipore is a trademark of the Millipore Corporation, Bedford, Massachusetts.

2.1.3 291-S Exhaust Fan Control House and Stack

Cooling water (raw) from the 291-S Facility emergency exhaust fan is routed to the 207-SL Retention Basin discharge box. Because this cooling water is added directly to the 207-SL Basin discharge box, it bypasses the sampling unit at the 207-SL Basin inlet and, therefore, is not routinely sampled and analyzed before going to the 216-S-26 Crib. The cooling water flowrate is approximately 6-8 gal/min when the emergency fan is activated. The fan and cooling water operate approximately 30 h/yr.

2.1.4 222-SA Analytical Chemical Standards Laboratory

The 222-SA Laboratory is a five-wide-trailer located southeast of the 222-S Control Laboratory. One section of the 222-SA Laboratory is used for preparing nonradioactive standards for the Plutonium-Uranium Extraction (PUREX) Plant Analytical Laboratory, the 234-5 Analytical Laboratory, and the 222-S Laboratory. The other section of the 222-SA Laboratory is used for cold process development work. Nonhazardous effluents (see Section 2.2.1 for a more detailed discussion) from the 222-SA Laboratory sinks, fume hoods, safety eye wash, and glass washer are discharged to the 216-S-26 Crib. This discharge occurs downstream of the 207-SL Retention Basin; therefore, it is not routinely sampled and analyzed. Because the 222-SA Laboratory is a "cold" standards laboratory, no monitoring for radioactive contaminants is required.

2.1.5 207-SL Retention Basin

The 222-S Laboratory wastewater, which is normally free of radioactive and hazardous chemical contamination, is routed to the 207-SL Retention Basin. The 207-SL Retention Basin acts as a temporary holding facility for potentially radioactive or hazardous liquid effluents before they are discharged to the 216-S-26 Crib. The 207-SL Facility is a below-grade concrete structure located directly east of the 222-S Building. Two 25,000-gal-capacity compartments allow batch collection, sampling, and discharge of the waste. The only monitoring equipment on the wastestream is a time-proportional sampler at the inlet to the 207-SL Basin used to automatically collect the record sample. The flow is normally measured using the totalizer and integrator on the proportional sampler. When the integrator or sampler is not functioning, the record sample is collected as a grab sample and the flow is measured by a dip tube in the basin that measure the number of inches of wastewater in the basin. The number of inches of wastewater is converted to gallons of wastewater. The wastewater is retained in the compartment until chemical and radionuclide analyses are completed. If the wastewater meets discharge specifications for surface discharge, it is routed to the 216-S-26 Crib, which is located southeast of the 222-S Laboratory. Wastewater generated during emergency or upset conditions within the 222-S Laboratory that exceeds radioactivity limits or Comprehensive Environmental Response Compensation and Liability Act (CERCLA) reportable quantities is routed to the 219-S Waste Treatment Building for disposal to

underground storage tanks. Effluent not meeting pH requirements is adjusted to a pH between 2.0 and 12.5 and discharged to the 216-S-26 Crib. Chemical adjustment of the effluent was not performed in the October 1989 to March 1990 sampling period.

2.1.6 216-S-26 Crib

The 216-S-26 Crib receives all effluents (meeting discharge specifications) that are collected in the 207-SL Retention Basin, the effluent from the 291-S Facility, and the nonhazardous effluent from the 222-SA Laboratory. The crib was designed to handle laboratory wastewater at 75,000 gal/d or 25,000 gal/8-h shift. Dimensions of the 216-S-26 Crib are approximately 420 ft by 10 ft.

2.2 CONTRIBUTORS

The following subsections describe known and potential contributors of wastewater and chemicals to the 222-S Laboratory wastewater system. Discharges to this system are limited to nonradioactive, nonhazardous wastewaters. Five types of contributors are described:

1. Process chemicals
2. Laboratory chemical stocks
3. Maintenance chemicals
4. Janitorial supplies and aerosols
5. Radionuclides.

2.2.1 Process Chemicals

Process chemicals are defined as pure chemicals or commercial products that are used on a routine basis. These substances are either known to be discharged via the 222-S Laboratory wastewater system or they are located so that a discharge is possible.

In the 222-S Laboratory, process chemicals include liquid laboratory cleaner, which is used in ultrasonic cleaners to clean glassware. Ultrasonic cleaning solution is discharged to the wastewater system. This cleaner is purchased in 5-gal-capacity bottles and mixed for use at a maximum concentration of 7.5 mL/gal (2%). About 10 to 15 gal are purchased each year for use in the 222-S Laboratory. The Material Safety Data Sheet (MSDS) for this product shows that it contains 0.7% ammonia as a hazardous ingredient. The MSDS also states that "Micro" is biodegradable and of low aquatic toxicity. An LD₅₀ (species not given) of >10,000 mg/L is reported. The MSDS states that the product is not toxic.

ingredient. The MSDS also states that "Micro" is biodegradable and of low aquatic toxicity. An LD₅₀ (species not given) of >10,000 mg/L is reported. The MSDS states that the product is not toxic.

Other commercial products, such as Dearcide* 730 and Dearcide 702, which are biocides, and Dearborn Poly Mate* 4690, a corrosion inhibitor, are used in the 222-S Laboratory's ventilation air supply water wash units. Additions of these chemicals are made only during months when ventilation system cooling water is in use (typically summer). Dearcide 730 consists of white tablets of 99% trichloro-s-triazinetrione. Additions are made weekly (if needed) for each fan in operation. A second tablet is added to the system whenever the existing tablet is more than half dissolved. Dearcide 702 is an aqueous solution of small quantities of several chemicals. (See Table A-1, Appendix A.) Four ounces of this liquid are added to the system weekly for each operating fan. Poly Mate 4690 is pumped into the system automatically from a drum. This product has been discontinued by the manufacturer. Composition data are not available at this time for Poly Mate 4690, although they have been requested by the Hanford Environmental Health Foundation.

The 222-S Laboratory also has a nitric acid tank. A pan drain for this tank was formerly routed to the retention basins. This drain has been rerouted, however, to an outdoor nitric acid tank that is not connected to the wastewater disposal system.

The only routine chemicals discharged from the 222-SA Laboratory are soaps used in cleaning used glassware. Used glassware in this laboratory is triple rinsed into accumulation containers which are managed and disposed of in labpacks according to WAC 173-303 requirements. Following triple rinsing, glassware is washed in ultrasonic cleaners. This ultrasonic cleaning solution is discharged to the 216-S-26 Crib. A number of commercial cleaners are used, including Micro Liquid Laboratory Cleaner, Markson All Purpose Detergent, Markson Ammoniated Detergent, Markson Sonic Phosphoric Detergent, and ESPI** Decontam. New glassware is washed in a commercial dishwasher using no soap. The Micro Liquid Laboratory Cleaner is the same nontoxic solution as that used in the 222-S Laboratory. The MSDS for the Markson products were not immediately available. The MSDS for the ESPI Decontam lists no hazardous ingredients, indicates that the product is nontoxic, and shows that it has a pH of 12 at full concentration.

Ion exchange columns in the 222-S and 222-SA Laboratories are backwashed with water only. New columns, however, are filled with a solution containing 20% glycerine and 3% formalin. (Formalin is a solution generally made up of formaldehyde, water, and methanol.) When the new columns are installed they are backwashed with water and the backwash goes to the 207-SL Basin or the 216-S-26 Crib.

*Trademarks of W. R. Grace and Company, New York, New York.

**ESPI is a trademark of Electronic Space Products, Inc., Los Angles, California.

Steam condensate discharged from the various facilities may contain Dearborn Super Filmeen* 14 which is used as a steam treatment at the power plants. Super Filmeen 14 is also a product listed as discontinued by its manufacturer. The MSDS lists no hazardous ingredients for this product. Concentrations of this product are expected to be very small because the 222-S Laboratory is at the end of the distribution system.

Appendix A, Table A-1, contains a list of the process chemicals known to enter the wastewater system.

2.2.2 Laboratory Chemical Stocks

Both the 222-S and 222-SA Laboratories contain numerous containers of small quantities of chemicals used in research and routine analytical work. Tables A-2, A-3, and A-4 of Appendix A contain lists of these chemicals. The bases for these tables are the December 5, 1989, process control laboratories (PCL) chemical inventory and the 222-SA Laboratory chemical inventory.

Dangerous chemicals are not discharged to the wastewater system. They are packaged for appropriate disposal according to standard operating procedures. There is a potential for accidental release because many of the chemicals are located in areas that also have drains to the wastewater system; however, there have been no spills of laboratory chemical stocks to the wastewater system. For example, until March 1990, the use of dispensing bottles in the 222-S Laboratory resulted in the occasional discharge of small droplets (<ml quantities) of some solutions to laboratory drains. These discharges occurred when solutions were removed from the dispensing bottle. Small droplets clinging to the discharge tubes were expelled, along with some air, when the plunger was depressed to raise the level of the solution to the outlet. The dispensing bottles were stored so that the discharge tubes were positioned over laboratory sinks. In March 1990, however, this practice was discontinued, and the discharges were collected and disposed of in accordance with WAC 173-303-200.

Chemicals contained in these dispensing bottles included nitric acid (7M), hydrochloric acid (7M), sodium carbonate (0.25M), silver nitrate (0.25M), Carbo-sorb** (98% 2-methoxyethylamine), ammonium chloride/ammonium hydroxide pH 10 solution, acetic acid, ammonium acetate buffer pH 4.5, and nitric acid (0.8M).

*Filmeen is a trademark of W. R. Grace and Company, Inc., New York, New York.

**Carbo-sorb is a trademark of Packard Instrument Company, Inc., Donners Grove, Illinois.

2.2.3 Maintenance Chemicals

The 222-S Laboratory maintenance area contains a number of commercial products (see Appendix A, Table A-5). Because manufacturers are required to report on MSDS only some of the ingredients considered hazardous by EPA, not all chemical components of these products are known.

2.2.4 Janitorial Supplies and Aerosols

The 222-S and 222-SA Laboratories use a number of janitorial supplies and aerosols in routine operations (see Appendix A, Table A-6). Alternate products may be used. Some of these products are duplicates of those listed as maintenance chemicals. The majority of the janitorial products are discharged through proper use to the sanitary sewer.

2.2.5 Radionuclides

Discharges to the 222-S Laboratory wastewater system are normally limited to nonradioactive sources. Consequently, little radioactive contamination is found in this stream. Wastewater exceeding the discharge specifications established in WHC-CM-7-5, *Environmental Compliance Manual*, Part F (WHC 1989b), are routed to the 219-S Waste Treatment Building. The total annual activity of alpha- and beta-emitting radionuclides discharged in 1988 from the 222-S Laboratory to the 216-S-26 Crib were 6.79×10^{-5} and $<1.27 \times 10^{-4}$ curies, respectively (Coony and Thomas 1989). In 1987, the total alpha and beta discharges were $<3.72 \times 10^{-5}$ and $<5.23 \times 10^{-4}$ curies, respectively (Coony et al. 1988).

2.3 PROCESS DESCRIPTION

The 222-S Laboratory was built during 1950 and 1951 to provide the analytical support necessary for process control in the Reduction-Oxidation (REDOX) Plant. The REDOX process is no longer operating and the nature of support responsibilities at the 222-S Laboratory has changed according to various missions over the years.

2.3.1 Present Activities

Facility personnel currently use the 4 hot cells and 150 open-face hoods at the 222-S Laboratory in support of several programs and plant operations (including PUREX Plant technology), waste fractionization and encapsulation, waste concentration, grout processing, and other activities associated with tank farms operations and single-shell tank waste characterization. Laboratory operations generate an active wastewater stream, averaging 6,800 gal (2,100-8,400) per 8-h shift, that is disposed of to the 216-S-26 Crib.

The 222-SA Laboratory is a "cold" (nonradioactive) laboratory that supplies standards for use in other laboratories, such as in the PUREX plant. The estimated volume of wastewater generated by the 222-S Laboratory is 1,000 gal/d. The wastewater discharge to the 216-S-26 Crib occurs downstream from the 207-SL Retention Basin and is not sampled or analyzed.

2.3.2 Past Activities

The 222-S Laboratory was originally built to support operation of the REDOX process and was used to support various plant operations. The process activities have changed little in the past five years. The 216-S-26 Crib was placed into service in October 1984. Before 1984, the wastewater was discharged to the 216-S-19 Pond or the 216-S-20 Crib.

2.3.3 Future Activities

The 222-S Laboratory has several process changes planned that will affect the 222-S Laboratory wastewater stream. The major change is the installation of recirculating vacuum pumps in the tunnel area. A 50% reduction in wastewater flow is expected as a result of installing the recirculating vacuum pumps. The wastewater will be collected, sampled and discharged once per day instead of once per shift.

The second process change will be the addition of holding tanks to accumulate wastewater that does not meet chemical or radioactivity discharge criteria. The 222-S wastewater that meets discharge criteria will be routed to the 200 Area Treated Effluent Disposal System (TEDS). The wastewater from the 222-SA Laboratory and the 291-S Facility will be routed to the 207-SL Retention Basin as part of this upgrade. An Engineering Study has been completed and funding is being sought for completing the project during FY 1993. Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-17-08, complete 200 Area treated effluent system, is scheduled for completion in June 1995.

The 222-S Laboratory is planning to add a treatment facility to process incoming steam. This process will add the commercial product Dearborn Steamate 2004* to the steam. Additional treatment of the steam is required because the 222-S Laboratory is at the end of the steam distribution system; hence, the additives that are made to the steam at the power plant do not carry to the 222-S Laboratory in adequate concentrations. Steamate 2004, a "return line treatment," is a liquid containing <8% diethylaminoethanol and <8% morpholine.

The time-proportional sampler used to collect the record sample will be replaced by a flow-proportional sampler during fiscal year (FY) 1991.

*Steamate 2004 is a trademark of W. R. Grace and Company, Inc., New York, New York.

2.4 PROCESS DATA

Chemicals that are known to be discharged via the 222-S Laboratory wastewater system are listed in Appendix A, Table A-1. Tables A-2 through A-6 of Appendix A contain lists of chemical stocks, maintenance supplies, as well as janitorial supplies and aerosols that could potentially be discharged to the wastewater system.

Estimated concentrations of chemicals known to be discharged to the 222-S Laboratory wastewater system are discussed below. The chemicals discharged via the 222-S Laboratory wastewater system may vary seasonally and according to laboratory activities. Additions of biocides to the ventilation system air supply water wash units are made only in the summer months. Laboratory chemical stocks, maintenance chemicals, and janitorial supplies and aerosols are not listed because either discharge is not likely or, in the case of chemicals stored in syringe-type dispensing bottles, the amount discharged was small. Chemicals stored in this manner included nitric acid (7M), hydrochloric acid (7M), sodium carbonate, "Carbo-sorb," ammonium chloride/ammonium hydroxide (pH 10), acetic acid, ammonium acetate buffer (pH 4.5), and nitric acid (0.8M).

The only routine discharge to the wastewater system for which annual quantities have been estimated is the discharge of "Micro" cleaner from the 222-S Laboratory. This cleaner contains 0.7% ammonia. Assuming a density of 1.0, the discharge of 15 gal (0.04 gal/d) of this material, when mixed in a daily flow of 18,000 gal, would result in a discharge concentration of 0.02 ppm of ammonia. Concentrations of ammonia at the 216-S-26 Crib are likely to be higher, because of the additional discharges, which equal the amount discharged by the 222-S Laboratory, made by the 222-SA Laboratory.

The 222-S Laboratory wastewater system consists of primarily nonradioactive streams. Consequently, no routine or quantifiable discharges of radionuclides are expected. Extremely low levels of radioactivity may be released to the 207-SL as a result of washing and rinsing laboratory glassware used to prepare effluent samples for analysis. The contents of the 207-SL Retention Basin are sampled and analyzed before discharge to verify that radioactive releases to the soil column do not exceed discharge limits established in WHC-CM-7-5 (WHC 1989b).

The flow (L/mo) of wastewater from the 222-S Laboratory to the 216-S-26 Crib during the sampling period, as measured using the dip tube method described in Section 2.1.5, is shown below:

<u>Month</u>	<u>Flow (L/mo)</u>
October 89	3.10E+06
November 89	3.20E+06
December 89	2.20E+06
January 90	1.87E+06
February 90	1.85E+06
March 90	1.82E+06

An additional 1,000 gal/d is the estimated discharge from the
222-SA Laboratory (Engineering Science, Inc. 1989).

3.0 SAMPLING DATA

This section provides an evaluation of the sampling data pertaining to the 222-S Laboratory wastewater. The sampling data does not include wastewaters from the 291-S Stack Fan House or from the 222-SA Standards Laboratory. These data are divided into two categories, wastestream data and background data, each of which is further subdivided into chemical data and radiological data. The discussion identifies the source of the samplings (Section 3.1) and a discussion of the data (Section 3.2).

3.1 DATA SOURCE

The data sources for this analysis are wastestream data (chemical and radiological) and background data (chemical and radionuclide content of the 200 West Area raw and sanitary water). All samples were collected as grab samples from the 207-SL Basin, even though this sample point did not sample the 291-S Facility or 222-SA Laboratory wastestream contributors. This sample point was chosen because it represented the major flow contributor to the 216-S-26 Crib. The 291-S cooling water was not sampled because it is used to cool the ventilation exhaust fan oil bath and is not expected to contribute radioactive or chemical constituents. It is not possible to sample the 222-SA Laboratory wastewater.

3.1.1 Wastestream Data

The wastestream data are made up of two distinct data sets: the chemical data set and the radiological data set (WHC 1990c).

3.1.1.1 Chemical Data. The chemical data set consists of four wastestream samples collected from the 207-SL Basin as grab samples from October 1989, through March 1990. All four samples were delivered to the contract laboratory for analysis. The chemical raw data (including only the detected analytes) are contained in Appendix B, Table B-1. Table 3-1 summarizes the analytical methods used to analyze the samples.

Representative samples were taken pursuant to EPA sampling and analytical protocols contained in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846 (EPA 1986). Grab samples of wastewater from the 207-SL Basin were collected randomly from various work shifts because the laboratory operates continuously on a demand basis. The details of sampling procedures and analytical procedures are contained in the *Waste Stream Characterization Report, Volume 4* (WHC 1989a).

3.1.1.2 Radiological Data. Radiological data are presented for characterization completeness only, because they have no current impact on the dangerous waste designation. The radiological data set consists of four wastestream samples collected from the 207-SL Basin as grab samples from October 1989

Table 3-1. Procedures for 222-S Laboratory Wastewater Samples.
 (sheet 1 of 2)

LEAD# CofC#	50661 50661	50673 50673	50804 50804	51079 51079
Alkalinity	X	X	X	X
Alpha counting	X	X	X	X
²⁴¹ Am	X	X	X	X
Ammonia	X	X	X	X
Arsenic	X	X	X	X
Atomic emission spectroscopy	X	X	X	X
Beta counting	X	X	X	X
¹⁴ C	X	X	X	X
Conductivity-field	X	X	X	X
Curium isotopes	X		X	X
Cyanide	X	X	X	X
Direct aqueous injection (GC)	X	X	X	X
Fluoride (LDL)	X	X	X	X
Gamma energy analysis	X	X	X	X
Hydrazine	X	X	X	X
Ion chromatography	X	X	X	X
Lead	X	X	X	X
Low-energy photon detection	X		X	
Mercury	X	X	X	X
pH-field	X	X	X	X
Plutonium isotopes	X	X	X	X
Selenium	X	X	X	X
Semivolatile organics (GC/MS)	X	X	X	X
Strontium beta counting	X	X	X	X
Sulfide	X	X	X	X
Suspended solids	X	X	X	X
Temperature-field	X	X	X	X
Thallium	X	X	X	X
Total carbon	X	X	X	X
Total dissolved solids	X	X	X	X
Total organic carbon	X	X	X	X
Total organic halides (LDL)	X	X	X	X
Total radium alpha counting	X	X	X	X
Tritium	X	X		X
Uranium	X	X	X	X
Uranium isotopes	X	X	X	X
Volatile organics (GC/MS)	X	X	X	X
LEAD# CofC#	50661B 50662	50673B 50674	50804B 50805	51079B 51080

Table 3-1. Procedures for 222-S Laboratory Wastewater Samples.
 (sheet 2 of 2)

LEAD#	50661E	50673E	50804E	51079E
CofC#	50664	50676	50807	51082
Volatile organics (GC/MS)	X	X	X	X
LEAD#	50661T	50673T	50804T	51079T
CofC#	50663	50675	50806	51081
Volatile organics (GC/MS)	X	X	X	X
Atomic emission spectroscopy	X	X	X	X
Ignitability	X	X	X	X
Mercury (mixed matrix)	X	X	X	X
Reactive cyanide	X	X	X	X
Reactive sulfide	X	X	X	X

Notes:

Procedures that were performed for a given sample are identified by an "X". Procedure references appear with the data.

LEAD# is the Liquid Effluent Analytical Data number that appears in the data reports. CofC# is the chain-of-custody number.

Abbreviations:

- gas chromatography (GC)
- low-detection limit (LDL)
- mass spectrometry (MS)

through March 1990 from the 207-SL Basin. The radiological samples were analyzed at the contract laboratory. The radiological raw data are contained in Appendix B, Table B-1.

3.1.2 Background Data

Knowledge of the feed water makeup chemistry (background data) for the processes was used, in conjunction with other data, to identify effluent constituents attributable to facility additions. This knowledge guided the process evaluation as well as supported listed waste determinations. There will be no attempt in this report to subtract source levels from the final effluent composition used for designation purposes. The bearing this type of information may have on permit release limits is also beyond the scope of this report.

The 222-S Laboratory uses sanitary, distilled, and raw Columbia River water. The sanitary water is river water that has been filtered, treated with alum, clarified, and chlorinated. Radiological and chemical analyses of the 200 West Area sanitary and raw water are presented below.

3.1.2.1 Chemical Background. The chemical background data set is made up of four samples of 200 West Area sanitary water (2724-W) collected during the sampling campaign conducted October 1, 1989, through March 31, 1990. The 2724-W sanitary water data are used for comparison purposes because it best represents the available data for the 200 West Area sanitary water. The chemical background data are contained in Appendix B, Table B-3.

3.1.2.2 Radionuclide Background. The radionuclide background data set is made up of 200 West Area raw water data collected from 1986 through 1987. The radionuclide background data are contained in Appendix B, Table B-3.

3.2 DATA PRESENTATION

The purpose of data presentation is to determine which analytes are present in the 222-S Laboratory wastestream. Data reduction is approached in three steps: (1) determining which analyses were performed, (2) listing the analytes that were detected, and (3) developing a statistical summary.

Samples were analyzed according to procedures of EPA protocol SW-846 (EPA 1986), when available, recently introduced EPA methods, standard analytical methods, methods of the American Society for Testing and Materials, or, as a final default, by local laboratory methods. Current (as of July 25, 1989) contract laboratory analytical methods are listed in Table 3-2.

Field measurements (i.e., conductivity, pH, and temperature) were performed by the Westinghouse Hanford Company sampling team. Laboratory analyses were performed by the contract laboratory.

Table 3-2. Contract Laboratory Analytical Information Sheet (Revised 7/25/89). (sheet 1 of 2)

Analysis	Reference ^a methods
RCRA Screening Tests	
Ignitability	SW846 Sec. 7.1
Corrosivity	SW846 Sec. 7.2
Reactivity	SW846 Sec. 7.3
Extraction Procedure Toxicity (EPTOX)	ORGANICS SW846 Sec. 7.4 INORGANICS SW846 Sec. 7.4 EXTRACTION 1310
Analysis	Detection limit ^b (water) ppm
Suspended Solids	5.000 209B
Coliform Bacteria	2.2MPN 9131
Coliform Bacteria by Membrane Filter	1 CPH 9132
Conductivity	D1125A
pH	9040
ICP Metals	c 6010
Chlorinated Pesticides ^b	0.0001 8080
Chlorinated Pesticides (Enhanced) ^b	0.0001 8080
Volatile Organic Analysis ^b	0.010 8240
A/B-N (Semivolatiles) ^b	0.010 8270
Phosphorus Pesticides ^b	0.001 8140
Anions (NO ₃ , SO ₄ , F, Cl, PO ₄ IC) ^b	0.500 300.0
Herbicide (Enhanced) ^b	0.0001 8150
Polychlorinated Biphenyls ^b	0.001 8080
Arsenic	0.005 7060
Mercury	0.0002 7470
Selenium	0.005 7740
Thallium	0.005 7841
Lead	0.005 7421
TOX (Total Organic Halides)	0.020 9020
TOC (Total Organic Carbon)	1.000 9060
Total Carbon	1.000 9060
Cyanide	0.010 9010
Nitrate (or other individual anion, each) (F, Cl, Br, NO ₂ , NO ₃ , PO ₄ , SO ₄)	0.500 300.0
Perchlorate	1.000 300.0
Sulfide	1.000 9030
Ammonium Ion	0.050 D1426D
Total Dissolved Solids	5.000 209B
Alkalinity (Routine)	20 D1067B
Oil and Grease	5.000 503A
Hydrazine	0.030 D1385
Fluoride (by ISE)	0.020 D1179B
Aluminum ^d	0.150

Table 3-2. Contract Laboratory Analytical Information
 Sheet (Revised 7/25/89). (sheet 2 of 2)

Analysis	Detection Limit ^b (water) ppm
Antimony ^d	0.020
Arsenic ^{d, e}	0.050
Barium ^d	0.006
Beryllium ^e	0.005
Boron ^e	0.010
Cadmium ^d	0.002
Calcium	0.050
Chromium ^d	0.010
Cobalt	0.005
Copper	0.010
Iron	0.030
Lead ^d	0.030
Magnesium	0.050
Manganese	0.005
Molybdenum	0.010
Nickel ^d	0.010
Potassium	0.100
Selenium ^{d, e}	0.050
Silicone	0.020
Silver ^d	0.010
Sodium	0.200
Strontium	0.020
Tin	0.050
Vanadium ^d	0.005
Zinc ^d	0.005

^aReference method numbers are as follows:

- 4 digit numbers--SW846, 3rd Ed, September 1987
- 4 digit numbers with decimal points--EPA method numbers
- A letter and 4 numbers--ASTM Methods.

Three numbers and a letter--Standard Methods for the Examination of Water and Wastewater, 16th Ed.

Some methods have been modified and extended to additional analytes.

^bDetection limits for multiple analyte methods are "typical" for the method. Actual detection limits for particular analytes may be different, units are ppm unless otherwise noted.

^cMetals by Inductively Coupled Plasma emission spectroscopy (SW846 Method 6010). Up to 29 metals may be requested simultaneously.

^dAppendix IX Hazardous Constituent, RCRA 40 CFR 264, and 270.

^eSpecial handling and preparation procedures required, call for information.

The semivolatile and volatile organic analyses were by gas chromatography/mass spectrometry (GC/MS). The raw data were evaluated relative to the current mass spectral library of the National Bureau of Standards, EPA, and National Institutes of Health. This library is composed of approximately 40,000 chemical constituents, each with a unique "signature" on a gas chromatograph/mass spectrometer analysis. These spectral assignments were made for targeted compounds and tentatively identified compounds. Targeted compounds were evaluated by a standard search program for every sample that was analyzed by these GC/MS methods. The search included the constituents listed in Appendix IX of 40 CFR 264 (EPA 1987). Tentatively identified compounds are reported by the spectral search if their intensities are greater than 25% of the nearest internal standard.

Unknowns are reported for the semivolatile organic and volatile organic analyses that were performed by GC/MS. There are two distinct reasons for this qualitative uncertainty. The first reason is that the mass spectrum of a compound cannot be matched to any of the 40,000 spectra in the combined library. The second reason is that multiple compounds co-elute from the chromatographic column and their overlapping mass spectra cannot be matched to any of the pure compounds in the combined spectral library. Because compounds that co-elute are frequently members of a homologous series, the unknowns can be reported by their functionality. For example, a mixture of fatty acids can be quantitated and reported as six unique "unknown fatty acids."

Detection limits are contractual. They reflect the needs of potential applications of the data and are within the capabilities of the servicing laboratory. Current (as of July 25, 1989) contract laboratory detection limits are also shown in Table 3-2.

The total number of different analytes (both radiological and chemical) detected in the effluent samples was approximately 40 (some are unknown). Detection here is defined as the contract laboratory detection limits. Sampling data are summarized in Table 3-3. It should be noted that several analytes in Table 3-3 are included based on one analysis above detection limits; therefore, care should be exercised in drawing conclusions for those analytes. It should also be noted that the units or exponents for the total dissolved solids (TDS) and suspended solids values appear to be in error. The raw water background radiological and chemical data summaries are listed in Appendix B, Table B-3.

Table 3-3. Chemical Data Summary.
 (sheet 1 of 2)

Constituent	N	MDA	Method	Mean	StdErr	90%CI Lim	Maximum
Arsenic (EP Toxic)	4	4	n/a	<5.00E+02	0.00E+00	<5.00E+02	<5.00E+02
Barium	4	0	n/a	2.82E+01	1.97E+00	3.15E+01	3.30E+01
Barium (EP Toxic)	4	4	n/a	<1.00E+03	0.00E+00	<1.00E+03	<1.00E+03
Boron	4	1	DL	1.65E+01	2.66E+00	2.09E+01	2.30E+01
Cadmium (EP Toxic)	4	4	n/a	<1.00E+02	0.00E+00	<1.00E+02	<1.00E+02
Calcium	4	0	n/a	1.69E+04	8.31E+02	1.83E+04	1.90E+04
Chloride	4	0	n/a	3.70E+03	8.38E+02	5.07E+03	5.20E+03
Chromium (EP Toxic)	4	4	n/a	<5.00E+02	0.00E+00	<5.00E+02	<5.00E+02
Copper	4	0	n/a	1.52E+02	3.54E+01	2.10E+02	2.47E+02
Fluoride	4	0	n/a	1.25E+02	8.50E+00	1.39E+02	1.42E+02
Iron	4	0	n/a	1.26E+02	3.72E+01	1.87E+02	2.25E+02
Lead (EP Toxic)	4	4	n/a	<5.00E+02	0.00E+00	<5.00E+02	<5.00E+02
Magnesium	4	0	n/a	3.94E+03	1.74E+02	4.23E+03	4.35E+03
Manganese	4	2	DL	7.25E+00	1.31E+00	9.40E+00	1.00E+01
Mercury (EP Toxic)	4	4	n/a	<2.00E+01	0.00E+00	<2.00E+01	<2.00E+01
Nitrate	4	3	DL	5.75E+02	7.50E+01	6.98E+02	8.00E+02
Potassium	4	0	n/a	7.64E+02	4.98E+01	8.46E+02	8.56E+02
Selenium (EP Toxic)	4	4	n/a	<5.00E+02	0.00E+00	<5.00E+02	<5.00E+02
Silicon	4	0	n/a	1.95E+03	7.43E+01	2.07E+03	2.06E+03
Silver (EP Toxic)	4	4	n/a	<5.00E+02	0.00E+00	<5.00E+02	<5.00E+02
Sodium	4	0	n/a	2.13E+03	1.82E+02	2.43E+03	2.55E+03
Strontium	4	0	n/a	9.15E+01	6.69E+00	1.02E+02	1.07E+02
Sulfate	4	0	n/a	1.31E+04	1.06E+03	1.48E+04	1.49E+04
Uranium	4	0	n/a	5.24E-01	1.49E-01	7.68E-01	9.58E-01
Vanadium	4	3	DL	5.50E+00	5.00E-01	6.32E+00	7.00E+00
Zinc	4	1	DL	1.52E+01	3.79E+00	2.15E+01	2.30E+01
Acetone	4	3	DL	1.02E+01	1.44E+00	1.26E+01	1.40E+01
Ammonia	4	2	DL	6.72E+01	1.03E+01	8.41E+01	9.10E+01
Trichloromethane	4	0	n/a	1.97E+01	2.50E+00	2.38E+01	2.50E+01
Unknown amide	1	0	n/a	2.60E+01	n/a	n/a	2.60E+01
Alkalinity (Method B)	4	0	n/a	4.75E+04	1.94E+03	5.07E+04	5.30E+04
Alpha Activity (pCi/L)	4	1	DL	2.00E+00	1.30E+00	4.14E+00	5.88E+00
Beta Activity (pCi/L)	4	2	DL	2.60E+00	1.09E+00	4.39E+00	5.00E+00
Conductivity (μ S)	4	0	n/a	2.38E+02	1.03E+02	4.06E+02	5.46E+02
Ignitability ($^{\circ}$ F)	4	0	n/a	2.09E+02	1.26E+00	2.07E+02	2.06E+02
pH (dimensionless)	4	0	n/a	6.96E+00	1.78E-01	6.67E+00	6.60E+00
Reactivity							
Cyanide (mg/kg)	4	4	n/a	<1.00E+02	0.00E+00	<1.00E+02	<1.00E+02
Reactivity							
Sulfide (mg/kg)	4	4	n/a	<1.00E+02	0.00E+00	<1.00E+02	<1.00E+02
Suspended Solids	4	3	DL	9.25E+03	4.25E+03	1.62E+04	2.20E+04
TDS	4	0	n/a	5.82E+04	9.10E+03	7.31E+04	7.80E+04
Temperature ($^{\circ}$ C)	4	0	n/a	1.90E+01	1.76E+00	2.19E+01	2.26E+01
TOC	2	1	DL	1.05E+03	5.00E+01	1.20E+03	1.10E+03
Total Carbon	4	0	n/a	1.25E+04	3.04E+02	1.30E+04	1.30E+04
TOX (as C1)	4	0	n/a	1.14E+02	1.09E+01	1.32E+02	1.33E+02

Table 3-3. Chemical Data Summary.
 (sheet 2 of 2)

Constituent	N	MDA	Method	Mean	StdErr	90%CILim	Maximum
^{241}Am (pCi/L)	4	0	n/a	7.86E-01	7.21E-01	1.97E+00	2.95E+00
^{14}C (pCi/L)	4	3	DL	2.61E+00	9.96E-01	4.24E+00	5.59E+00
^3H (pCi/L)	3	2	DL	1.75E+02	5.87E+01	2.86E+02	2.90E+02
^{238}Pu (pCi/L)	4	1	DL	1.61E-02	9.48E-03	3.16E-02	4.31E-02
$^{239},^{240}\text{Pu}$ (pCi/L)	4	0	n/a	2.21E-01	1.74E-01	5.06E-01	7.42E-01
Radium Total (pCi/L)	3	2	DL	9.45E-02	4.92E-02	1.87E-01	1.74E-01
^{90}Sr (pCi/L)	4	3	DL	1.24E-01	6.03E-02	2.22E-01	2.93E-01
^{234}U (pCi/L)	4	0	n/a	1.05E-01	1.96E-02	1.38E-01	1.55E-01
^{238}U (pCi/L)	4	0	n/a	1.02E-01	1.69E-02	1.29E-01	1.30E-01

NOTES:

Mean values, standard errors, confidence interval limits and maxima are in ppb (parts per billion) unless indicated otherwise.

The column headed MDA (Minimum Detectable Amount) is the number of results in each data set below the detection limit.

The column headed Method shows the MDA replacement method used: replacement by the detection limit (DL), replacement of single-valued MDAs by the log-normal plotting position method (LM), or replacement of multiple valued MDAs by the normal plotting position method (MR).

The column headed "90%CILim" (90% Confidence Interval Limit) is the lower limit of the one-tailed 90% confidence interval for all ignitability data sets and pH data sets with mean values below 7.25. For all other data sets it is the upper limit of the one-tailed 90% confidence interval.

The column headed "Maximum" is the minimum value in the data set for ignitability, the value furthest from 7.25 for pH, and the maximum value for all other analytes.

This page intentionally left blank.

4.0 DATA OVERVIEW

This section presents a comparison of the process data set (see Section 2.0) with the sampling data set (see Section 3.0) to determine the identity and concentration levels of the chemical analytes present in the 222-S Laboratory wastestream. It also provides estimates of the stream loading for radionuclides and chemical constituents.

4.1 DATA COMPARISON

A qualitative comparison of process data and wastewater sampling data is presented in Table 4-1. The sampling data averages are taken from Table 3-5, in which the 222-S Laboratory wastewater chemical sample data collected from both compartments of the 207-SL Retention Basin have been combined. The process data are taken from Appendix A, Tables A-1 through A-6.

NOTE: Parameters such as conductivity, pH, temperature, and TDS are not included in Table 4-1.

It is apparent from Table 4-1 that all of the chemical analytes detected in the wastestream samples have identified possible sources in the process chemicals and the 222-S and 222-SA Laboratory chemicals, except for uranium. The uranium does not have an identified possible source in either the 222-S Laboratory or the 222-SA Laboratory.

As previously mentioned (Section 2.4), the chemicals that were stored over sinks included nitric acid, hydrochloric acid, sodium carbonate, Carbosorb, ammonium chloride/ammonium hydroxide, acetic acid, and ammonium acetate buffer. These chemicals were included in the wastestream sampling strategy.

The chemical analytes and radionuclides listed in Table 4-1 represent the best available characterization of the 222-S Laboratory wastestream. Additional wastewater sampling could be used to determine if the five process chemicals listed above should be added to Table 4-1. Additional sampling could also be helpful for identifying some of the unknowns and unknown aliphatic hydrocarbons.

Table 4-2 provides a comparison of average constituents concentrations to various screening criteria. These criteria are not used here for compliance purposes.

In order to assess the relevance of the chemical and radionuclide data, the mean of the analyte concentration was compared to the background mean concentration. A quantitative measure of the significance of the analytes detected was the ratio of sample mean to either background or a concentration guideline mean.

Table 4-1. Comparison of Sampling Data and Process Data.

Chemical analytes	N	Sampling data, average (ppb)	Process data
Acetone	4	1.0 E+01	CS-SA, MA
Ammonium	4	6.7 E+01	PC, CS-S, CS-SA
Barium	4	2.8 E+01	CS-S, CS-SA
Boron	4	1.7 E+01	CS-S, CS-SA
Calcium	4	1.7 E+04	CS-S, CS-SA
Chloride	4	3.7 E+03	PC, CS-S, CS-SA
Chloroform	4	2.0 E+01	CS-SA
Copper	4	1.5 E+02	CS-S, CS-SA
Fluoride	4	1.3 E+02	CS-S, CS-SA
Iron	4	1.3 E+02	CS-S, CS-SA
Magnesium	4	3.9 E+03	PC, CS-S, CS-SA
Potassium	4	7.6 E+02	CS-S, CS-SA
Silicon	4	2.0 E+03	CS-S, CS-SA, MA
Sodium	4	2.1 E+03	CS-S, CS-SA
Strontium	4	9.2 E+01	CS-S, CS-SA
Sulfate	4	1.3 E+04	CS-S, CS-SA
TOC	2	1.1 E+03	PC, CS-S, CS-SA, MA
TOX	4	1.1 E+02	PC, CS-S, CS-SA, MA
Uranium	4	5.2 E-01	
Vanadium	4	5.5 E+00	CS-S, CS-SA
Zinc	4	1.5 E+01	CS-S, CS-SA

N = Number of sample analyses.

PC = Process chemical.

CS-S = 222-S Laboratory chemical stock.

CS-SA = 222-SA Laboratory chemical stock.

MA = Maintenance area chemicals.

Table 4-2. Evaluation of 222-S Laboratory Wastewater.

Constituent	Result ^a	SV1 ^b	SV2 ^c
Barium	2.8E-02	5.0E+00 g	
Chloride	3.7E+00	2.5E+02 h	
Copper	1.5E-01	1.0E+00 h	
Fluoride	1.2E-01	2.0E+00 g	
Iron	1.3E-01	3.0E-01 h	
Manganese	7.3E-03	5.0E-02 h	
Nitrate	5.8E-01	4.5E+01 e	
Sulfate	1.3E+01	2.5E+02 h	
Zinc	1.5E-02	5.0E+00 h	
Trichloromethane ^j	2.0E-02	1.0E-01 g	
Alpha Activity (pCi/L) ⁿ	2.0E+00	1.5E+01 g	3.0E+01
²⁴¹ Am (pCi/L)	7.9E-01	4.0E+00 e	3.0E+01
Beta Activity (pCi/L)	2.6E+00		1.0E+03
¹⁴ C (pCi/L)	2.6E+00	3.0E+03 e	7.0E+04
³ H (pCi/L)	1.8E+02	9.0E+04 e	2.0E+06
²³⁸ Pu (pCi/L)	1.6E-02		4.0E+01
^{239,240} Pu (pCi/L) ^l	2.2E-01	4.0E+01 e	3.0E+01
⁹⁰ Sr (pCi/L)	1.2E-01	5.0E+01 e	1.0E+03
²³⁴ U (pCi/L)	1.0E-01		5.0E+02
²³⁸ U (pCi/L)	1.0E-01		6.0E+02
TDS	5.8E+01	5.0E+02 h	

Notes:

^aUnits of results are mg/L unless indicated otherwise. The results are the mean values reported in the Statistics table of chapter 3.

^bScreening Value 1 (SV1) lists the value first, basis second and an asterisk (*) third if the result exceeds the regulatory value. The basis is the proposed primary MCL (e), the proposed secondary MCL (f), the primary MCL (g), or the secondary MCL (h). The value is the smaller of two MCLs: the proposed primary MCL (or the primary MCL as a default) or the proposed secondary MCL (or the secondary MCL as a default). See WHC-EP-0342, "Hanford Site Stream-Specific Reports", August 1990.

^cScreening Value 2 (SV2) lists the value first and an asterisk (*) second if the result exceeds the SV2). These values are derived concentration guides obtained from Appendix A of WHC-CM-7-5, "Environmental Compliance Manual", Revision 1, January 1990.

^jThe SV1 value for trihalomethanes is used to evaluate trichloromethane results.

^lThe SV1 value for ²³⁹Pu is used to evaluate ^{239,240}Pu.

ⁿThe SV1 and SV2 values for Gross Alpha are used to evaluate Alpha Activity.

^oThe SV2 for Gross Beta is used to evaluate Beta Activity.

4.2.1 Chemical

Table 4-3 presents a comparison of background and sample means for the chemical analytes. Comparison ratios that exceed 1.0 are listed in Table 4-4. A review of this table shows most of the comparison ratios are less than one, and that a few are between 1 and 10.

The ratio for copper was 10 (probably from steam condensate corrosion of laboratory copper steam heating coils).

4.2.2 Radiological

In order to assess the relevance of the radionuclide data, the mean of the radionuclide concentration was compared to the background mean concentration. Comparison ratios that exceed 1.0 are listed in Table 4-4.

4.2 STREAM DEPOSITION RATES

The deposition rates for chemical and radiological constituents were calculated using the average constituents concentration from Table 3-3 and the wastewater stream average flow data from Section 2.4. This does not include contributors from the 222-SA Laboratory and the 291-S Facility wastestreams. The wastewater stream deposition rates are reported in kg/mo or Ci/mo and are presented in Table 4-5.

Table 4-3. Comparison of Detected Sample Data with Detected Background Data.

Analyte	222-S Laboratory Wastewater (Ave)(1)	Background (Ave)(1)	Comparison Ratio
Barium	2.82E+01	2.90E+01(3)	0.97
Boron	1.65E+01	1.77E+01(3)	0.93
Calcium	1.69E+04	1.87E+04(3)	0.90
Chloride	3.70E+03	2.92E+03(3)	1.27
Copper	1.52E+02	1.52E+01(2)	10.00
Fluoride	1.25E+02	1.28E+02(3)	0.98
Iron	1.26E+02	3.27E+01(3)	3.85
Magnesium	3.94E+03	4.35E+03(3)	0.91
Manganese	7.25E+00	1.68E+01(2)	0.43
Nitrate	5.75E+02	5.00E+02(3)	1.15
Potassium	7.64E+02	7.28E+02(3)	1.05
Silicon	1.95E+03	2.14E+03(3)	0.94
Sodium	2.13E+03	2.05E+03(3)	1.04
Strontium	9.15E+01	9.47E+01(3)	0.97
Sulfate	1.31E+04	1.40E+04(3)	0.94
Uranium	5.24E-01	2.54E-01(3)	2.06
Zinc	1.52E+01	5.85E+01(3)	0.26
Acetone	1.02E+01	N. D.	
Ammonia	6.72E+01	N. D.	
Trichloromethane	1.97E+01	2.82E+01(3)	0.70
Alpha Activity (pCi/L)	2.00E+00	2.30E+00(2)	0.87
Beta Activity (pCi/L)	2.60E+00	4.33E+00(3)	0.60
Conductivity (uS)	2.38E+02	1.45E+02(3)	1.64
Suspended solids	9.25E+03	N. D.	
TSD	5.82E+04	5.37E+04(3)	1.08
TOC (µg/g)	1.05E+03	1.61E+03(3)	0.65
Total carbon (µg/g)	1.25E+04	1.51E+04(3)	0.83
TOX [µg(Cl)/L]	1.14E+02	1.42E+02(3)	0.80

(1) Values are the mean value for the constituent and units are in ppb unless otherwise stated

(2) Compiled for Substance Toxicity Evaluation of Waste Data Base provided by F. M. Jungfleisch (this data is an update of the data presented in WHC 1988, "Preliminary Evaluation of Hanford Liquid Discharges to Ground").

(3) Data from sampling campaign conducted October 1, 1989 to March 30, 1990 in support of Stream Specific Reports

N. D. = Not Detected or analyzed for in background raw or sanitary water

Table 4-4. Comparison Ratios that Exceed 1.0.

Analytes detected above background	Comparison ratio
Copper	10.0
Iron	3.9
Uranium	2.1
Conductivity*	1.6
Chloride	1.3
Nitrate	1.2
Potassium	1.1
TSD	1.1

Note: Wastewater means are divided by background means to compute comparison ratios.

*Measurements taken in the field.

Table 4-5. Deposition Rate for 222-S Laboratory Wastewater.
 Flowrate: 2.34E+06 L/mo.

Constituent	Kg/L*	Kg/mo*
Barium	2.82E-08	6.60E-02
Boron	1.65E-08	3.86E-02
Calcium	1.69E-05	3.95E+01
Chloride	3.70E-06	8.66E+00
Copper	1.52E-07	3.56E-01
Fluoride	1.25E-07	2.92E-01
Iron	1.26E-07	2.95E-01
Magnesium	3.94E-06	9.22E+00
Manganese	7.25E-09	1.70E-02
Nitrate	5.75E-07	1.35E+00
Potassium	7.64E-07	1.79E+00
Silicon	1.95E-06	4.56E+00
Sodium	2.13E-06	4.98E+00
Strontium	9.15E-08	2.14E-01
Sulfate	1.31E-05	3.07E+01
Uranium	5.24E-10	1.23E-03
Vanadium	5.50E-09	1.29E-02
Zinc	1.52E-08	3.56E-02
Acetone	1.02E-08	2.39E-02
Ammonia	6.72E-08	1.57E-01
Trichloromethane	1.97E-08	4.61E-02
Unknown amide	2.60E-08	6.08E-02
Alpha Activity *	2.00E-12	4.68E-06
Beta Activity *	2.60E-12	6.08E-06
Suspended Solids	9.25E-06	2.16E+01
TDS	5.82E-05	1.36E+02
TOC	1.05E-06	2.46E+00
Total Carbon	1.25E-05	2.92E+01
TOX (as Cl)	1.14E-07	2.67E-01
²⁴¹ Am *	7.86E-13	1.84E-06
¹⁴ C *	2.61E-12	6.11E-06
³ H *	1.75E-10	4.09E-04
²³⁸ Pu *	1.61E-14	3.77E-08
^{239,240} Pu *	2.21E-13	5.17E-07
Radium Total *	9.45E-14	2.21E-07
⁹⁰ Sr *	1.24E-13	2.90E-07
²³⁴ U *	1.05E-13	2.46E-07
²³⁸ U *	1.02E-13	2.39E-07

Notes:

Data collected from October 1989 through March 1990.

Flowrate is the average of rates from chapter 2.

Constituent concentrations are average values from the Statistics Report in Chapter 3.

Concentration units of flagged (*) constituents are reported as curies per liter.

Deposition rate units of flagged (*) constituents are reported as curies per month.

This page intentionally left blank.

5.0 DESIGNATION

This section proposes that the 222-S Laboratory Wastewater not be designated a dangerous waste. This proposed designation uses data from both the effluent source description and present sample data (Sections 2.0 through 4.0) and complies with the designation requirements of WAC 173-303-070.

Also this section proposes that the 291-A Facility cooling water and 222-SA Laboratory wastewater not be designated as dangerous wastes; however, their designation is based solely on process data.

As discussed in Section 3.1, the 291-S Facility wastestream is cooling (raw) water used to cool the exhaust fan oil both and does not contribute radioactive or chemical constituents to the 216-S-26 Crib. The 222-SA Laboratory wastestream, described in Section 2.2.1, is not a dangerous waste because all liquid hazardous waste is properly collected and managed according to WAC-173-303 requirements. All glassware used in preparing reagents and standards is triple rinsed before washing in ultrasonic cleaners. The rinsate is properly disposed of in labpacks. The ultrasonic cleaning solution is discharged directly to the 216-S-26 Crib. The remaining discussion in Chapter 5.0 pertains only to the 222-S Laboratory wastestream.

The Washington State Dangerous Waste Regulations (WAC 173-303-070) contains a procedure for determining whether a waste is a dangerous. This procedure is illustrated in Figure 5-1 and includes the following:

- Dangerous Waste Lists (WAC 173-303-080)
- Dangerous Waste Criteria (WAC 173-303-100)
- Dangerous Waste Characteristics (WAC 173-303-090).

5.1 DANGEROUS WASTE LISTS

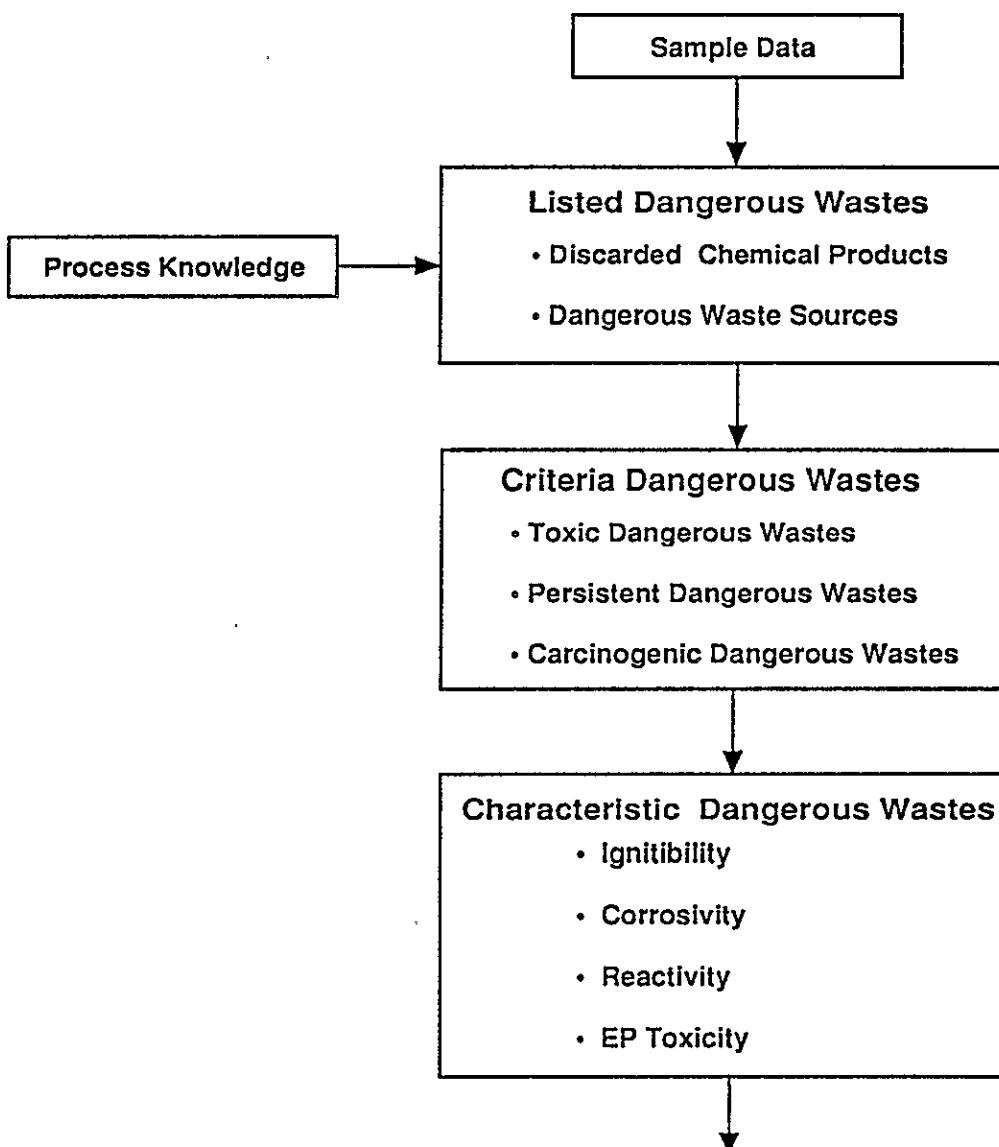
A waste is considered a listed dangerous waste if it either contains a discarded chemical product (WAC 173-303-081) or originates from a dangerous waste source (WAC 173-303-082). The proposed designation was based on a contamination of process knowledge and present sampling data.

5.1.1 Discarded Chemical Products

A wastestream constituent is a discarded chemical product (WAC 173-303-081) if it is listed in WAC 173-303-9903 and is characterized by one or more of the following descriptions.

- The listed constituent was the sole active ingredient in a commercial chemical product that had been discarded. Commercial chemical products which, as purchased, contained two or more active

Figure 5-1. Illustration of the Designation Procedure.



29004107.7

ingredients were not designated as discarded chemical products. Products that contained nonactive components such as water, however, were designated if the sole active ingredient in the mixture was listed in WAC 173-303-9903.

- The constituent results from a spill of unused commercial chemical products. (A spill of a discarded chemical product would cause a wastestream to be designated during the time that the discharge is occurring. The approach taken is that the current wastestream would not be designated unless a review of past spill events indicates that the spills are predictable, systematic events that are ongoing or are reasonably anticipated to occur in the future. In this report, the evaluation of this criterion is based on a review of spill data in accordance with the CERCLA.)
- The constituent is discarded in the form of a residue resulting from cleanup of a spill of an unused commercial chemical product on the discarded chemical products list. A chemical product that is used in a process and then released to the wastestream is not a discarded chemical product. Off-specification, unused chemicals, and chemicals that have exceeded a shelf life but have not been used are considered discarded chemical products.

5.1.2 Dangerous Waste Sources

A list of dangerous waste sources is contained in WAC 173-303-9904, pursuant to WAC 173-303-082. There are three major categories of sources in WAC 173-303-9904. The first is nonspecific sources from routine operations occurring at many industries. The second is specific sources (e.g., wastes from ink formulation, etc.). The third is state sources, which is limited to polychlorinated biphenyl (PCB)-contaminated transformers and capacitors resulting from salvaging, rebuilding, or discarding activities.

Of the nonspecific sources, only F001 (specific spent halogenated degreasing solvents), F002 (specific spent halogenated solvents), F003 (specific spent nonhalogenated solvents), and F005 (specific spent nonhalogenated solvents) apply to the 222-S Laboratory wastewater.

5.2 LISTED WASTE DATA CONSIDERATIONS

The proposed designation of the wastestream described in this report is based on an evaluation of process and sampling data. The following sections describe the types of information used in this designation.

5.2.1 Process Evaluation

The process evaluation began with a thorough review of the processes contributing to the wastestream. Processes were reviewed and compared with

the discarded chemical products list and the dangerous waste source list. This process evaluation is necessary because the stream could be a listed waste if a listed waste was known to have been added at any upstream location, even if a listed constituent was not detected at the sample point. The process evaluation included a review of the following information sources:

- MSDS
- Superfund Amendments and Reauthorization Act (SARA) Inventory reports
- Operating procedures
- Process chemical inventories
- Physical inspections, where possible.

Additionally, appropriate interviews with facility personnel were conducted to determine if there were any procedures laboratory processes that generated a listed waste that may not have been evident during other portions of the process evaluation.

If a listed chemical was identified, the specific use of the chemical was evaluated to determine if such use results in the generation of a listed waste.

5.2.2 Sampling Data

Present sampling data were used as screening tools to enhance and support the results of the process evaluation. This screening compared the results of the sampling data with the WAC 173-303-9903 and -9904 lists. If a constituent was cited on one or both of these lists, an engineering evaluation was performed to determine if the constituent had entered the wastestream as a discarded chemical product or came from a dangerous waste source.

Screening organic constituents is a relatively simple procedure because analytical data for organic constituents are reported as substances and are easily compared to the WAC 173-303-9903 and -9904 lists. It is not as simple to screen inorganic analytical data because inorganic data are reported as ions or elements rather than as substances. For example, an analysis may show that a wastestream contains the cations sodium and calcium along with the anions chloride and nitrate. The possible combinations of substances include: sodium chloride, sodium nitrate, calcium chloride, and calcium nitrate. In a situation with many cation and anions, however, the list of possible combinations is extensive.

A procedure was developed by Westinghouse Hanford Company for combining the inorganic constituents into substances. This screening procedure is

described in WHC (1990b) and is intended to be a tool in the evaluation of a wastestream. The listing of the inorganic substances developed by this screening procedure is not intended to be an indication that the substance was discharged to the wastestream, only that the necessary cations and anions are present and an investigation should be conducted to determine how they entered the wastestream. Table 5-1 documents how ion analytes were assigned to neutral substances which are required for designation. The table accounts for charge balancing the ion assemblage (from Table 3-3) and subsequent formulation of neutral substances. A detailed discussion can be found in the report entitled *Wastestream Designation for Liquid Effluent Analytical Data* (WHC 1990b).

5.3 PROPOSED LISTED WASTE DESIGNATION

A process evaluation, along with a review of sampling data, indicated that the 222-S Laboratory wastewater did not contain a discarded chemical product or a listed waste source. The following sections discuss the evaluation that was conducted to substantiate this conclusion.

5.3.1 Discarded Chemical Products

As discussed in Section 5.2, a process evaluation of the contributors to the 222-S Laboratory wastewater was conducted. This evaluation included a review of MSDS at the plant and chemical inventories compiled for compliance with the SARA Title III requirements for possible listed waste contributors. Inspections produced no evidence of the discharge of any of these chemical products into the 222-S Laboratory wastewater.

Table 5-2 contains a list of five potential discarded chemical products identified from sampling data using the screening procedure previously described in Section 5.2. Of these five compounds, three were identified in the process evaluation as being present in the facility. Each of these five compounds will be discussed in the following sections.

Based on the considerations and data presented in the following sections it is concluded that the 222-S Laboratory wastestream does not contain any discarded chemical products.

5.3.1.1 Acetone. Acetone is used in the 222-A Laboratory in the X-Ray laboratory (used when mounting samples). Interviews with personnel in this area and reviews of the procedures in place for disposal of unused or unwanted chemicals in this area provided no evidence that acetone had been disposed of as the sole active ingredient in an unused or out-of-specification chemical product.

Acetone appeared in one of the four samples taken of the wastewater stream. The concentration of acetone in the sample of the wastewater was 14 ppb. The rejection criteria for acetone based on blank analyses is 37 ppb as presented in Section 5.2 of the "parent" document, WHC-EP-0342.

Table 5-1. Inorganic Chemistry for the 222-S Laboratory Wastewater.
 (sheet 1 of 2)

Constituent	ppb	Ion	Eq/g	Normalized
Charge Normalization:				
Barium	3.15E+01	Ba+2	4.58E-10	
Boron	2.09E+01	B407-2	9.65E-10	2.20E-09
Calcium	1.83E+04	Ca+2	9.14E-07	
Chloride	5.07E+03	Cl-1	1.43E-07	3.26E-07
Copper	2.10E+02	Cu+2	6.62E-09	
Fluoride	1.39E+02	F-1	7.31E-09	1.67E-08
Iron	1.87E+02	Fe+3	1.01E-08	
Magnesium	4.23E+03	Mg+2	3.48E-07	
Manganese	9.40E+00	Mn+2	3.42E-10	
Nitrate	6.98E+02	NO3-1	1.13E-08	2.57E-08
Potassium	8.46E+02	K+1	2.16E-08	
Silicon	2.07E+03	SiO3-2	1.47E-07	3.36E-07
Sodium	2.43E+03	Na+1	1.06E-07	
Strontium	1.02E+02	Sr+2	2.34E-09	
Sulfate	1.48E+04	SO4-2	3.09E-07	7.04E-07
Uranium	7.68E-01	UO2+2	6.46E-12	
Vanadium	6.32E+00	V+5	6.20E-10	
Zinc	2.15E+01	Zn+2	6.57E-10	
Hydrogen Ion (from pH 6.7)		H+	(2.12E-10)	
Hydroxide Ion (from pH)		OH-	(4.72E-11)	
Cation total			1.41E-06	
Anion total			6.19E-07	

Anion normalization factor: 2.280

Substance Formation:	%	Cation Out	Anion Out
Substance			
Copper(II) chloride	4.45E-05	0.00E+00	3.20E-07
Uranyl nitrate	1.27E-07	0.00E+00	2.57E-08
Vanadium(V) oxide	1.13E-06	0.00E+00	
Iron(III) fluoride	3.78E-05	0.00E+00	6.62E-09
Potassium fluoride	3.85E-05	1.50E-08	0.00E+00
Barium chloride	4.77E-06	0.00E+00	3.19E-07
Zinc nitrate	6.22E-06	0.00E+00	2.50E-08
Magnesium chloride	1.52E-03	2.90E-08	0.00E+00
Magnesium nitrate	1.97E-04	4.01E-09	0.00E+00
Calcium tetraborate	2.15E-05	9.12E-07	0.00E+00
Magnesium sulfate	2.41E-05	0.00E+00	7.00E-07
Sodium metasilicate	6.45E-04	0.00E+00	2.30E-07
Potassium metasilicate	1.16E-04	0.00E+00	2.15E-07
Manganese(II) metasilicate	2.24E-06	0.00E+00	2.15E-07
Strontium sulfate	2.15E-05	0.00E+00	6.97E-07
Calcium sulfate	4.75E-03	2.14E-07	0.00E+00

Table 5-1. Inorganic Chemistry for the 222-S Laboratory Wastewater.
(sheet 2 of 2)

NOTES:

Statistics based on a single datum are noted by an asterisk (*). With the exception of hydrogen ion and hydroxide, others report the upper limit of the one-tailed 90% confidence interval. Hydrogen ion is based on the lower limit of the one-tailed 90% confidence interval for pH sets with mean values below 7.25 and on the upper limit of the one-tailed 90% confidence interval for pH data sets with mean values of 7.25 or higher. The hydroxide magnitude is equal to $1.00E-20$ (Eq/g) **2 divided by the hydrogen ion value (in Eq/g).

Ion concentrations in equivalents per gram (Eq/g) are based on the statistic. Conversions include scale (ppb to g/g), molecular weight (constituent form to ionic form), and equivalents (charges per ion). The column headed "Normalized" shows normalized concentrations (also in Eq/g) calculated by increasing concentrations of cations, excluding Hydrogen ion, or anions, excluding hydroxide, by the normalization factor. The normalization factor is the larger of the cation total, including Hydrogen ion, or anion total, including hydroxide, divided by the smaller total.

Substance names may include MB (monobasic), DB (dibasic), TB (tribasic) to identify the equivalents of hydrogen ion that have been neutralized from polycrotic weak acids to form their conjugate bases.

Substances are formulated in the order listed. The column headed "%" is the percent of the substance in the waste (gms/100gms). Substances formulated with oxygen are based on the residual concentration of the counterion. Other substance concentrations are based on the limiting residual concentration of the cation or anion. The columns headed "Cation Out" and "Anion Out" indicate the residual concentrations (in Eq/g) of each ion after a substance concentration has been calculated.

Table 5-2. Dangerous Waste Designation Report for 222-S Laboratory Wastewater. (sheet 1 of 2)

Dangerous Waste Data Designation Report for 222-S Laboratory Wastewater

Finding: Undesignated

Discarded Chemical Products - WAC 173-303-081

Substance	Review Number	Status	DW Number
Ammonium metavanadate	P119(EHW)	Not Discarded	Undesignated
Hydrogen fluoride	U134(DW)	Not Discarded	Undesignated
Vanadium(V) oxide	P120(EHW)	Not Discarded	Undesignated
Acetone	U002(DW)	Not Discarded	Undesignated
Trichloromethane	U044(EHW)	Not Discarded	Undesignated

Dangerous Waste Sources - WAC 173-303-082

Substance	Review Number	Status	DW Number
Acetone	F003	Unlisted Source	Undesignated

Infectious Dangerous Waste - WAC 173-303-083

No regulatory guidance

Dangerous Waste Mixtures - WAC 173-303-084

Substance	Toxic EC%	Persistent HH%	PAH%	Carcinogenic Total%
Barium chloride	4.77E-09	0.00E+00	0.00E+00	0.00E+00
Calcium tetraborate	2.15E-09	0.00E+00	0.00E+00	0.00E+00
Copper(II) chloride	4.45E-06	0.00E+00	0.00E+00	0.00E+00
Iron(III) fluoride	3.78E-07	0.00E+00	0.00E+00	0.00E+00
Magnesium chloride	1.52E-07	0.00E+00	0.00E+00	0.00E+00
Magnesium nitrate	1.97E-08	0.00E+00	0.00E+00	0.00E+00
Magnesium sulfate	2.41E-09	0.00E+00	0.00E+00	0.00E+00
Potassium fluoride	3.85E-08	0.00E+00	0.00E+00	0.00E+00
Sodium metasilicate	6.45E-08	0.00E+00	0.00E+00	0.00E+00
Uranyl nitrate	1.27E-09	0.00E+00	0.00E+00	0.00E+00
Vanadium(V) oxide	1.13E-08	0.00E+00	0.00E+00	0.00E+00
Zinc nitrate	6.22E-09	0.00E+00	0.00E+00	0.00E+00
Acetone	1.26E-10	0.00E+00	0.00E+00	0.00E+00
Ammonia	8.41E-08	0.00E+00	0.00E+00	0.00E+00
Trichloromethane	2.38E-07	2.38E-06	0.00E+00	2.38E-06
Total DW Number	5.45E-06	2.38E-06	0.00E+00	2.38E-06
	Undesignated	Undesignated	Undesignated	Undesignated

Dangerous Waste Characteristics - WAC 173-303-090

Characteristic	Value	DW Number
Ignitability (Degrees F)	>207	Undesignated
Corrosivity-pH	6.67	Undesignated
Reactivity Cyanide (mg/kg)	<1.00E+02	Undesignated
Reactivity Sulfide (mg/kg)	<1.00E+02	Undesignated
EP Toxic Arsenic (mg/L)	<5.00E-01	Undesignated
EP Toxic Barium (mg/L)	<1.00E+00	Undesignated
EP Toxic Cadmium (mg/L)	<1.00E-01	Undesignated
EP Toxic Chromium (mg/L)	<5.00E-01	Undesignated
EP Toxic Lead (mg/L)	<5.00E-01	Undesignated
EP Toxic Mercury (mg/L)	<2.00E-02	Undesignated
EP Toxic Selenium (mg/L)	<5.00E-01	Undesignated
EP Toxic Silver (mg/L)	<5.00E-01	Undesignated

Table 5-2. Dangerous Waste Designation Report for 222-S Laboratory Wastewater. (sheet 2 of 2)

Dangerous Waste Data Designation Report for 222-S Laboratory Wastewater

Dangerous Waste Criteria - WAC 173-303-100

Substance	Toxic EC%	Persistent HH%	PAH%	Carcinogenic Total%	DW Number	Positive
Barium chloride	4.77E-09	0.00E+00	0.00E+00	0.00E+00		
Calcium tetraborate	2.15E-09	0.00E+00	0.00E+00	0.00E+00		
Copper(II) chloride	4.45E-06	0.00E+00	0.00E+00	0.00E+00		
Iron(III) fluoride	3.78E-07	0.00E+00	0.00E+00	0.00E+00		
Magnesium chloride	1.52E-07	0.00E+00	0.00E+00	0.00E+00		
Magnesium nitrate	1.97E-08	0.00E+00	0.00E+00	0.00E+00		
Magnesium sulfate	2.41E-09	0.00E+00	0.00E+00	0.00E+00		
Potassium fluoride	3.85E-08	0.00E+00	0.00E+00	0.00E+00		
Sodium metasilicate	6.45E-08	0.00E+00	0.00E+00	0.00E+00		
Uranyl nitrate	1.27E-09	0.00E+00	0.00E+00	0.00E+00		
Vanadium(V) oxide	1.13E-08	0.00E+00	0.00E+00	0.00E+00		
Zinc nitrate	6.22E-09	0.00E+00	0.00E+00	0.00E+00		
Acetone	1.26E-10	0.00E+00	0.00E+00	0.00E+00		
Ammonia	8.41E-08	0.00E+00	0.00E+00	0.00E+00		
Trichloromethane	2.38E-07	2.38E-06	0.00E+00	2.38E-06	Undesignated	
Total	5.45E-06	2.38E-06	0.00E+00	2.38E-06		
DW Number	Undesignated	Undesignated	Undesignated	Undesignated	Undesignated	

Dangerous Waste Constituents - WAC 173-303-9905

Substance
Ammonium metavanadate
Hydrogen fluoride
Acetone
Trichloromethane
Barium and compounds, NOS

Substance names may include MB (monobasic), DB (dibasic), or TB (tribasic) to identify the equivalence of hydrogen ion that have been neutralized from polyprotic weak acids to form their conjugate bases.

Results based on a single datum are noted by an asterisk (*). Others are based on the lower limit of the one-tailed 90% confidence interval for pH data sets with mean values below 7.25 or by the upper limit of the one-tailed 90% confidence interval for all other data sets.

EP Toxic contaminants, ignitability, and reactivity are reported by standard methods when available. In the absence of EP Toxicity data, total contaminant concentrations are evaluated. In lieu of closed cup ignition results, ignitability is estimated from the sum of the contributions of all substances that are ignitable when pure. A waste is flagged as dangerous if sum of the ignitable substances exceeds one percent. Reactivity is by SW-846: 250 mg of cyanide as hydrogen cyanide per kg of waste or 500 mg of sulfide as hydrogen sulfide per kg of waste. Total cyanide and total sulfide are used in lieu of amenable cyanide and amenable sulfide.

Inorganic substances are formulated and their possible concentrations calculated for designation purposes only. The actual existence in the waste of these substances is not implied and should not be inferred.

As the concentration of acetone seen in this wastewater stream is less than the rejection criteria, this data will not be considered in the designation of wastestream samples because of sample contamination.

5.3.1.2 Ammonium Metavanadate. Ammonium is an active ingredient in the liquid laboratory cleaner used in ultrasonic cleaners. The vanadium was detected in 1 of 4 samples. Although ammonium metavanadate is listed in the Appendix A chemical inventory, it is not the sole active ingredient of products used in 222-S Laboratory operations processes. Review of the procedures in place for disposal of unwanted or unused chemicals provided no evidence that ammonium metavanadate had been discarded as the sole active ingredient in an unused or out-of-specification chemical product.

5.3.1.3 Chloroform. Chloroform (trichloromethane) is used in 222-S Laboratory in research (as an extractant). Interviews with personnel in this area and reviews of the procedures in place for disposal of unused or unwanted chemicals in this area provided no evidence that chloroform had been disposed of as the sole active ingredient in an unused or out-of-specification chemical product.

Chloroform appeared in all of the four samples taken of the wastewater stream. The concentration of chloroform in all samples of the wastewater ranged from 20 to 25 ppb. The rejection criteria for chloroform based on sanitary water supplied to 222-S Laboratory is 50 ppb as presented in Section 5.2 of WHC-EP-0342. As the concentration of chloroform seen in all of the samples of this wastewater stream is less than the rejection criteria, these data will not be considered in the designation of the wastestream as it is likely that chloroform is present in these wastestream samples because of the presence of chloroform in the facility water supply.

5.3.1.4 Hydrogen Fluoride. Hydrogen fluoride (48% aqueous solution) is used in the 222-S Laboratory in the environmental laboratory (dissolve radioactive solid samples). The waste solution is properly disposed of to the 219-S Facility. Interviews with personnel in this area and reviews of the procedures in place for disposal of unused or unwanted chemicals in this area provided no evidence that hydrogen fluoride had been disposed of as the sole active ingredient in an unused or out-of-specification chemical product.

Hydrogen fluoride appeared in all of the four samples taken of the wastewater stream. The concentration of fluoride in all samples of the wastewater ranged from 119 to 142 ppb. The rejection criteria for monofluorides based on sanitary water supplied to 222-S Laboratory is 143 ppb as presented in Section 5.2 of WHC-EP-0342. As the concentration of hydrogen fluoride seen in all of the samples of this wastewater stream is less than the rejection criteria, these data will not be considered in the designation of the wastestream as it is likely that hydrogen fluoride is present in these wastestream samples due to the presence of fluoride in the facility water supply.

5.3.1.5 Vanadium Oxide. Vanadium oxide is listed in the Appendix A chemical inventory but is not used in 222-S Laboratory processes or analytical

procedures. Review of the procedures in place for disposal of unwanted or unused chemicals provided no evidence that vanadium oxide had been discarded as the sole active ingredient in an unused or out-of-specification chemical product. Vanadium is a common trace element in soil at the Hanford Site. The probable method of entrance of vanadium into the wastewater is from blow sand entering the 207-SL Basin.

Based on the considerations and data presented in the previous sections, it is concluded that the 222-S Laboratory wastestream does not contain any discarded chemical products.

5.3.2 Dangerous Waste Sources

The process evaluation (see Section 5.2) was also used to determine if the wastestream included any specific waste sources (K and W wastes) or any nonspecific waste sources (F wastes) in the Dangerous Waste Source List WAC 173-303-9904.

Based on the discussion and data presented in the following sections, it is concluded that the 222-S Laboratory wastestream does not have a dangerous waste source.

5.3.2.1 Process Data. Of the known and routine discharges to the 222-S Laboratory wastewater system, the glassware cleaners, air-washer biocides, corrosion inhibitor, and steam line treatments are not listed as specific or nonspecific dangerous waste sources. Ultrasonic cleaning solutions of unknown compositions used in the 222-SA Laboratory should be characterized to determine whether they would be listed sources; however, they are not expected to be listed sources.

The 20% glycerine/3% formalin preservative solution contained in new 222-SA Laboratory ion exchange columns may contain methyl alcohol, which is a listed source as a spent solvent. Formalin is a solution of about 37 wt% of formaldehyde gas in water, usually with 10-15% methanol added to prevent polymerization (Merck & Co., Inc., 1989). The composition of the solution in the ion exchange columns is thus approximately: 20% glycerine, 1.1% formaldehyde, and 0.3 to 0.45% methanol. Because the methanol is not present as a solvent, the glycerine/formalin solution is not a listed dangerous waste source.

The chemical stocks stored in plunger-type dispensing bottles that were situated over laboratory sinks are not identified on the lists of specific or nonspecific dangerous waste sources. Therefore, they are not listed wastes.

5.3.2.2 Sampling Data. Acetone is the only detected substance on the WAC 173-303-9904 list.

Acetone is used in the 222-S laboratory in the following area: X-Ray Laboratory (used when mounting samples). Interviews with personnel in these areas and reviews of the procedures in place for disposal of spent chemicals in this area provided no evidence that acetone had been disposed of as a waste solvent.

Acetone appeared in one of the four samples taken of the wastewater stream. The concentration of acetone in the sample of the wastewater 14 ppb. The rejection criteria for acetone based on blank analyses if 37 ppb as presented in Section 5.2 of the "parent" document of WHC-EP-0342. As the concentration of acetone seen in this wastewater stream is less than the rejection criteria, this data will not be considered in the designation of the wastestream as it is likely that the acetone is present in this wastestream samples due to sample contamination.

Based on this analysis, the 222-S Laboratory is not considered a nonspecific-source listed waste.

5.4 DANGEROUS WASTE CRITERIA

A waste is considered a dangerous waste if it meets any of the following criteria categories (WAC 173-303-100): toxic dangerous waste, persistent dangerous waste, or carcinogenic dangerous waste. A description of the methods used to test the sampling data against the criteria is contained in WHC 1990b. Summaries of the methods, along with the results, are contained in the following sections.

5.4.1 Toxic Dangerous Wastes

The procedure for determining if a wastestream is a toxic dangerous waste is as follows (WAC 173-303-101).

- Collect and analyze multiple samples from the wastestream.
- Calculate the upper limit of the one-sided 90% confidence interval for each analyte in the wastestream.
- Formulate substances from the analytical data. NOTE: This step is only required for inorganic analytes because it is not possible to complete the evaluation based on the concentrations of cations and anions. This methodology is described in WHC 1990b and is based on an evaluation of the most toxic substances that can exist in an aqueous environment under normal temperatures and pressures.
- Assign toxic categories to the neutral substances formulated for the wastestream.
- Calculate the contribution of each substance to the percent equivalent concentration (EC%).

- Calculate the EC% by summing the concentrations of each substance.
- Designate the wastestream as a toxic dangerous waste if the EC% is greater than 0.001%, per WAC 173-303-9906.

Fifteen substances potentially present in the 222-S Laboratory wastewater were determined to have toxic categories associated with them. The individual and sum equivalent values for these substances are listed in Table 5-2. The contributions to the EC% and the EC% values for these substances are listed in Table 5-2.

Because the sum EC% is 5.45 E-06, which is below the cutoff of 1.0 E-03 (i.e., 0.001%), the wastestream is not a toxic dangerous waste.

5.4.2 Persistent Dangerous Wastes

The procedure for determining if a wastestream is a persistent dangerous waste is as follows (WAC 173-303-102).

- Collect multiple grab samples of the wastestream.
- Determine which substances in the wastestream are halogenated hydrocarbons (HH) and which are polycyclic aromatic hydrocarbons (PAH).
- Determine the upper limit of the one-sided 90% confidence interval for the substances of interest.
- Calculate the weight (wt%) contribution of each HH and PAH.
- Sum the resulting HH% and PAH% contributions separately.
- Designate the wastestream as persistent if the HH% concentration is greater than 0.01% or if the PAH% concentration is greater than 1.0%, in accordance with WAC 173-303-9907.

The individual and sum equivalent values for these substances are listed in Table 5-2. One substance, chloroform, was determined to be a halogenated hydrocarbon; no substances were determined to be polycyclic aromatic hydrocarbons. Because the HH% for chloroform is 2.38 E-06% (0.00000238%), well below 0.001 wt% limit at which the waste becomes regulated for persistence, the 222-S Laboratory wastestream is not a persistent dangerous waste.

5.4.3 Carcinogenic Dangerous Wastes

The procedure for determining if a wastestream is a carcinogenic dangerous waste is as follows (WAC 173-303-103).

- Collect multiple grab samples of the wastestream.
- Determine the upper limit of the one-sided 90% confidence interval for the substances of interest.
- Formulate substances from the analytical data. NOTE: This step is only required for inorganic analytes because it is not possible to complete the evaluation based on the concentrations of cations and anions. This methodology is described in WHC 1990b and is based on an evaluation of the carcinogenic substances that exist in an aqueous environment under normal temperatures and pressures.
- Determine which substances in the wastestream are human or animal carcinogens according to the International Agency for Research on Cancer (IARC).
- Calculate the wt% concentration for each carcinogen.
- Sum the resulting wt% contributions.
- Designate the wastestream as carcinogenic if any of the carcinogens are above 0.01% or if the total concentration is for positive and suspected carcinogens above 1.0%.

One substance, chloroform, potentially present in the 222-S Laboratory wastestream was determined to be a carcinogenic substance. The value for chloroform is listed in Table 5-2. Because the positive carcinogen does not exceed 0.01% and the sum is well below 1.0%, the 222-S Laboratory wastestream is not a carcinogenic dangerous waste.

5.5 DANGEROUS WASTE CHARACTERISTICS

A waste is considered a dangerous waste if it is ignitable, corrosive, reactive, or extraction procedure (EP) toxic (WAC 173-303-090). A description of the methods used to evaluate the data in terms of these characteristics is contained in WHC 1990b. Summaries of the methods, along with the results, are contained in the following sections. The summaries of these results may be found in Table 5-2.

5.5.1 Ignitability

Flashpoint testing was performed on the 222-S Laboratory liquid effluent samples. All samples reached the boiling temperature of water without

igniting. These data are not included in Table 5-2. Therefore, the 222-S Laboratory wastestream is not an ignitable waste.

5.5.2 Corrosivity

A waste is a corrosive dangerous waste if it has a pH of ≤ 2.0 or ≥ 12.5 . The comparison to this characteristic was based on the lower limit of the one-sided 90% confidence interval for a stream with a mean value of pH < 7.25 and the upper limit of the one-sided 90%CI for a stream with a mean value of ≥ 7.25 .

Because the mean value of the pH measurements for the 222-S Laboratory wastewater is below 7.25 the lower confidence interval limit, 6.67, is used. The wastestream is not a corrosive dangerous waste (WAC 173-303-090[6]).

5.5.3 Reactivity

An aqueous waste is reactive if the waste contains an amount of cyanide or sulfide under conditions near corrosivity to threaten human health or the environment (WAC 173-303-090[7]). If levels of (equivalent) hydrogen cyanide (HCN) below 250 ppm or of (equivalent) H₂S below 100 mg/kg are not considered reactive.

Total cyanide and total sulfide levels in the 222-S Laboratory wastewater were below the 100 mg/kg detection limit. This wastestream is not a reactive dangerous waste.

5.5.4 Extraction Procedure Toxicity

A waste is an EP toxic dangerous waste if contaminant results from EP toxicity testing exceed the limits of WAC 173-303-090(8)(c). The EP toxicity test results are listed in Table 5-2. All analytes in the EP toxicity test had concentrations below the EP toxicity detection limits; therefore, the 222-S Laboratory wastestream is not an EP toxic dangerous waste.

5.6 PROPOSED DESIGNATION

Because the 222-S Laboratory wastestream does not contain any dangerous waste, as defined in WAC 173-303-070, it is proposed that the wastestream not be designated a dangerous waste. Also, it is proposed, based only on process knowledge, that the 291-S Building and 222-SA Laboratory wastestreams not be designated as dangerous waste.

This page intentionally left blank.

6.0 ACTION PLAN

This chapter addresses recommendations for future waste characterization tasks for the liquid effluents that are within the scope of the Liquid Effluent Study. The final extent of and schedule for any recommended tasks are subject to negotiation between Ecology, EPA and DOE. An implementation schedule for the completion of these tasks will give consideration to other compliance actions already under way as part of the Tri-Party Agreement (Ecology et al. 1989), an on the availability of funding. All effluent monitoring and sampling will be conducted according to DOE Order 5400.1, ("General Environmental Protection Program," issued November 9, 1988).

6.1 FUTURE SAMPLING

The random sampling conducted during the October 1989 to March 1990 period included only the 222-S Laboratory wastestream. It did not include the 222-SA Laboratory wastestream or the 291-S Facility cooling water. It is recommended that the 291-S cooling water be sampled at the outlet box from the 207-SL Basin to the 216-S-26 Crib to verify the process knowledge. It is currently not possible to sample the 222-SA Laboratory wastestream. However, it is recommended that the wastestream, with all stream contributors, be sampled from manhole #3, located west of the 216-S-26 Crib.

6.2 TECHNICAL ISSUES

A number of chemicals in routine use, including ultrasonic cleaning solutions at 222-SA, and air/water treatment compounds are not fully characterized. The annual amount used should be estimated and the composition verified for products listed in Table A-1 of Appendix A. The concentrations estimated to be discharged should be compared to the defining criteria for dangerous waste mixtures.

The commercial products Poly Mate 4690 and Super Filmeen 14 listed in Table A-1 of Appendix A have been discontinued by their manufacturer. Replacement products, their composition and estimated usage, should be identified for comparison to the designation regulations.

The 291-S cooling water and 222-SA Laboratory wastewater should be routed to the 207-SL Basin upstream from the proportional sampler. This would ensure that any chemical or radioactive contamination would be detected prior to release of the effluent to the 216-S-26 Crib and would allow flow measurement of all wastestream contributors. The 222-S Laboratory is actively pursuing funding for completing this project (described fully in Section 2.2.3) during FY 1993.

This page intentionally left blank.

7.0 REFERENCES

- Coony, F. M., D. B. Howe, and L. J. Voigt, 1988, *Westinghouse Hanford Company Effluent Releases and Solid Waste Management Report for 1987: 200/600/1100 Areas*, WHC-EP-0141, Westinghouse Hanford Company, Richland, Washington.
- Coony, F. M. and S. P. Thomas, 1989, *Westinghouse Hanford Company Effluent Discharges and Solid Waste Management Report for Calendar Year 1988: 200/600 Areas*, WHC-EP-0141-1, Westinghouse Hanford Company, Richland, Washington.
- Ecology, 1989, *Dangerous Waste Regulations*, Washington Administrative Code (WAC) 173-303, Washington State Department of Energy, Olympia, Washington.
- Engineering-Science, Inc., 1989, *Best Available Technology (BAT) Study for the 222-S Laboratory*.
- EPA, 1986, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, SW-846, 3rd Edition, U.S. Environmental Protection Agency, Washington, D.C.
- Merck & Co., Inc., 1989, *The Merck Index*, 11th ed., Rahway, New Jersey.
- PNL, 1988, *Environmental Monitoring at Hanford for 1987*, PNL-6464, Pacific Northwest Laboratory, Richland, Washington.
- WHC, 1989a, *Waste Stream Characterization Report*, WHC-EP-0287, Volumes 1 through 4, Westinghouse Hanford Company, Richland, Washington.
- WHC, 1989b, *Environmental Compliance Manual*, WHC-CM-7-5, Westinghouse Hanford Company, Richland, Washington.
- WHC, 1990a, *Liquid Effluent Study Project Plan*, WHC-EP-0275, Revision 2, Westinghouse Hanford Company, Richland, Washington.
- WHC, 1990b, *Wastestream Designation for Liquid Effluent Analytical Data*, WHC-EP-0334, Westinghouse Hanford Company, Richland, Washington.
- WHC, 1990c, *Liquid Effluent Study Characterization Data*, WHC-EP-0355, Westinghouse Hanford Company, Richland, Washington.

This page intentionally left blank.

APPENDIX A

**PROCESS CHEMICALS, CHEMICAL STOCKS, MAINTENANCE CHEMICALS
AND JANITORIAL SUPPLIES AND AEROSOLS**

This page intentionally left blank.

Table A-1. Process Chemicals.

Product	Components	Annual Usage	Source
Liquid Laboratory Cleaner	0.7% Ammonia	10-15 gal/yr	222-S
Dearcide* 730	99% Trichloro-s-triazinetrione	Not Available	
Dearcide* 702	1.15% 5-Chloro-2-methyl-4-isothiazolin-3-one 0.35% 2-Methyl-4-isothiazolin-3-one <2% Magnesium chloride <3% Magnesium nitrate <96% Water	Not Available	222-S
Poly Mate* 4690	Not Available, Discontinued Product	Not Available	222-S
Steamate* 2004	<8% Diethylaminoethanol <8% Morpholine	None - addition to 222-S stream is planned	222-S
Super Filmeen* 14	"No Hazardous Ingredients"	Not Available	All Facilities Steam Condensate

*Trademarks of W. R. Grace and Company, New York, New York.

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 1 of 13)

Chemical name	Number of containers	Total amount
Adipic Acid	2	900 g
Agar	1	400 g
Aluminum C ₂₂ H ₂₃ N ₃ O ₉	1	100 g
Aluminum (powder)	1	453 g
Aluminum (dust)	1	453 g
Aluminum (granular)	2	907 g
Aluminum (turnings)	2	453 g
Aluminum fluoride (anhydrous)	3	190 g
Aluminum hydroxide	5	11,340 g
Aluminum (nickel alloy)	1	55 g
Aluminum nitrate	6	3,000 g
Aluminum oxide	20	12,607 g
Aluminum potassium sulfate	2	826 g
Aluminum sulfate	1	453 g
p-Aminodimethylaniline sulfate	1	100 g
Aminoquaninanidine-bicarbonate	1	100 g
Aminoquaninanidine-sulfate	1	100 g
Amino-2-naphthol-4-sulfonic acid	1	100 g
Ammonium acetate	1	500 g
Ammonium bicarbonate (Ammonium hydrogen carbonate)	1	453 g
Ammonium borate (octahydrate)	3	1,359 g
Ammonium carbonate	6	2,059 g
Ammonium chloride	5	1,995 g
Ammonium citrate (dibasic)	2	846 g
Ammonium dichromate	1	200 g
Ammonium fluoride	4	2,000 g
Ammonium molybdate	1	200 g
Ammonium nitrate	20	11,604 g
Ammonium oxalate	1	400 g
Ammonium persulfate	1	5 lb
Ammonium phosphomolybdate reagent	1	100 g
Ammonium phosphate (monobasic)	4	1,814 g
Ammonium sulfate	3	850 g
Ammonium thiocyanate	1	500 g
Ammonium zirconium fluoride	1	250 g
Arrowroot starch	1	453 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 2 of 13)

Chemical name	Number of containers	Total amount
Arsenazo I	1	10 g
1-(o-Arsonophenylazo)-2-naphthol-3,6-disulfonic acid disodium salt	1	25 g
Ascarite (SiO_2 coated with NaOH)	1	500 g
Ascorbic Acid Powder	1	300 g
Barbituric acid	1	100 g
Barium metal	1	100 g
Barium carbonate	1	75 g
Barium chloranilate	1	25 g
Barium chloride	2	11,340 g
Barium dioxide	1	450 g
Barium diphenylamine sulfonate	1	25 g
Barium hydroxide	1	400 g
Barium nitrate	3	1,359 g
Barium oxide	1	453 g
Bentonite powder	2	906 g
Benzenearsonic acid phenylarsonic acid	1	25 g
Benzene tetracarboxylic acid pyromellitic acid	1	100 g
Benzoinanti-oxime	1	20 g
N,N-bis (3-Dimethylaminopropyl) dithiooxamide {Rubeanic Acid}	1	20 g
Bismuth (metal)	1	453 g
Bismuth nitrate	6	2,459 g
Bismuth oxide	4	1,800 g
Bismuth phosphate	1	300 g
Boric acid	2	700 g
Boron trioxide	1	2,268 g
Brilliant, Creosyl Blue	1	10 g
Bromo-p-nitrotoluene	1	25 g
Calcium acetate	1	450 g
Calcium carbide calcium acetylide (CaC_2)	1	450 g
Calcium carbonate	4	1,700 g
Calcium chloride (anhydrous)	1	2,258 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 3 of 13)

Chemical name	Number of containers	Total amount
Calcium chloride dihydrate	3	2,564 g
Calcium cyanamide	1	500 g
Calcium fluoride	1	500 g
Calcium metasilicate	1	2,000 g
Calcium nitrate	2	550 g
Calcium oxalate	1	400 g
Calcium stannate	1	1,000 g
d-Camphoric acid	1	100 g
Carboxymethyl-imino bis (ethylenedinitrilo) tetraacetic acid (DTPA)	1	300 g
Ceric ammonium nitrate	1	908 g
Ceric oxide	2	700 g
Ceric sulfate (cerium sulfate)	2	908 g
Cerium Chloride (cerous chloride)	1	500 g
Cerium oxalate	1	500 g
Cerous nitrate (cerium nitrate nonahydrate)	11	1,180 g
Cesium carbonate	6	12,040 g
Cesium chloride	1	100 g
Cesium fluoride	1	10 g
Cesium hydroxide	1	250 g
Cesium iodide	1	100 g
Cesium nitrate	11	1,094 g
Cetyl pyridinium bromide	1	100 g
Chloroacetic acid	1	250 g
Chloroplatinic acid	1	110 g
Chromium acetate	1	450 g
Chromium nitrate	2	700 g
Chromium sulfate	1	50 g
Chromotropic acid (sodium salt)	1	100 g
Citric acid (monohydrate)	6	23,800 g
Citric acid (anhydrous)	1	350 g
Cobalt (metal, 300 mesh)	1	113 g
Cobaltous acetate	1	450 g
Cobalt nitrate	2	600 g
Copper (metal powder)	1	180 g
Copper (metal turnings, shot)	3	2,235 g
o-cresolphthalein complexone	0	10 g
18-crown-6	0	10 g
Coumarin	1	100 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 4 of 13)

Chemical name	Number of containers	Total amount
Cupric carbonate copper II	1	450 g
Cupric chloride copper II	2	900 g
Cupric nitrate	3	230 g
Cupric sulfate	8	3,625 g
1,2-Cycloheptanedione (syn. Heptoxime)	1	10 g
1,2-Cyclohexanediaminetetraacetic acid CYDTA	1	100 g
(1,2-Cyclohexylenedinitrilo)-tetraacetic acid	2	190 g
Dextrose-glucose	1	450 g
Devarda's Alloy (Al44-5%, Cu49-51%, Zn4-5%)	2	900 g
1,2-Diaminocyclohexane N,N,N',N'-tetraacetic monohydrate	3	300 g
Diatomaceous earth	2	4,310 g
5,7-Dibromo-8-quinolinol	1	100 g
Dicyclopentadien-1-yliron (Ferrocene)	1	25 g
p-Dimethylaminobenzaldehyde	1	100 g
5-(p-[Dimethylamino]-benzylidene)-rhodanine	1	10 g
N-(p-dimethylaminophenyl)-1,4-naphthoquinoneimine	1	25 g
3,3'-Dimethyl-1,1'-diphenyl-(4,4'-bi-2-pyrazoline-5,5'-dione)	5	150 g
N,N-Dimethyl-p-nitrosoaniline	1	25 g
3,5-Dinitrobenzoic acid	1	65 g
Diphenylamine	3	290 g
Diphenic acid	1	75 g
1,5-Diphenylcarbohydrazide	1	100 g
1,3-Diphenylguanidine	1	100 g
Disodium dihydrogen ethylenediaminetetra-acetate dihydrate	1	450 g
Disodium fumarate (fumaric acid, disodium salt)	1	113 g
2,5-Ditertrapentylhydroquinone	1	500 g
2,5-Ditertrabutylhydroquinone	1	500 g
2,5-Dithiobiurea	1	25 g
Dithiooxamide	1	75 g
Ethylenediamine Tetraacetic Acid (EDTA)	2	1,200 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 5 of 13)

Chemical name	Number of containers	Total amount
(Ethylenedinitrilo) tetraacetic acid disodium salt	3	725 g
Ethylenediamine tetraacetic acid tetrасsodium salt	2	3,500 g
(Ethylenedinitrilo)tetraacetic acid ferric sodium salt	1	1,000 g
EDTA tetrasodium salt (dihydrate)	5	1,960 g
Ethyl p-hydroxybenzoate	1	100 g
1-Ethylquinolinium iodide	1	100 g
Europium oxide	1	3 g
Ferric ammonium sulfate	11	5,300 g
Ferric chloride	1	250 g
Ferric nitrate iron III	15	6,654 g
Ferric oxide iron III	4	1,800 g
Ferric sulfate	8	8,750 g
Ferrous ammonium sulfate	9	3,670 g
Ferrous sulfate iron II	18	7,798 g
Ferrous sulfide iron II	1	2,300 g
Formic acid (sodium salt)	1	1,000 g
Fumaric acid	1	500 g
Furil dioxime	1	10 g
Gadolinium nitrate	4	400 g
Gadolinium oxide	1	100 g
Gallic acid	1	100 g
Gallium ingot	1	5 g
Gelatin (powder)-soluble collagen	2	900 g
Gluconic acid (sodium salt)	1	1,000 g
Glycerine 96%	1	250 mL
Glycolic acid 70%	1	500 g
Gum arabic acacia	1	25 g
Hafnium oxynitrate	1	1 g
Hexane	0	NA
Hydrobenzamide	1	25 g
Hydroquinone	1	100 g
Hydroxylamine hydrochloride	4	1,515 g
N-hydroxyethylethylene diamine triacetic acid trisodium salt (HEDTA)	1	100 g
N(2-hydroxyethyl)ethylenediamine triacetic acid trisodium salt dihydrate	1	2,517 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 6 of 13)

Chemical name	Number of containers	Total amount
N-(2-hydroxyethyl)ethylene-diaminetriacetic acid (HEDTA)	4	1,800 g
Hydroxylammonium Sulfate	1	250 g
1-(1-Hydroxy-2-naphthylazo)-6-nitro-2-naphthol-4-sulfonic acid sodium salt	1	100 g
p-(3-Hydroxy-3-phenyl-1-triazeno)-benzenesulfonic acid sodium salt	1	10 g
Humic acid, technical	1	2,000 g
Indigo	1	100 g
Iodic acid	3	650 g
Iron carbonate	1	250 g
Iron (metal powder)	1	1,360 g
Iron (metal lump)	1	250 g
Itaconic acid	1	450 g
Kaolin	1	450 g
Lanthanum nitrate	3	290 g
Lanthanum fluoride	1	200 g
Lanthanum oxide	2	900 g
Lanthanum rare earth carbonate (Ce<1%) octahydrate	1	650 g
Lauric acid	1	500 g
Lead (metal)	1	500 g
Lead borate	3	1,350 g
Lead chloride	1	453.6 g
Lead dioxide	1	450 g
Lead nitrate	14	6,564 g
Lithium carbonate	4	1,410 g
Lithium chloride	3	1,362 g
Lithium fluoride	4	1,815 g
Lithium hydroxide	4	1,712 g
Lithium metaborate	4	300 g
Lithium nitrate	3	1,208 g
Magnesium chloride hexahydrate	2	600 g
Magnesium fluoride	12	5,340 g
Magnesium (metal)	2	900 g
Magnesium nitrate	2	800 g
Magnesium (powder)	2	900 g
Magnesium sulfate (anhydrous)	2	800 g
Magnesium trisilicate	1	454 g
Malic acid	1	250 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 7 of 13)

Chemical name	Number of containers	Total amount
Manganese (metal)	5	11,340 g
Manganese dioxide	4	3,629 g
Manganese (II) nitrate (50%)	13	6.473 L
Manganese (II,III) oxide	1	2,000 g
Manganous chloride tetrahydrate	1	100 g
Manganous sulfate	1	500 g
Mercuric nitrate	1	100 g
Mercuric acetate	1	112 g
Mercuric chloranilate	1	2 g
Mercuric chloride	1	100 g
Mercuric oxide	2	500 g
Mercurous chloride	1	454 g
Mercurous nitrate	1	400 g
Metal (Wood's Alloy\:Bi4Pb2SnCd)	1	100 g
Methylene blue	1	25 g
Methyl green	1	25 g
5-Methyl-4-nitroso-2-iso-propylphenol	1	10 g
3-Methyl-1-phenyl-2-pyrazolin-5-one	1	50 g
2-Methyllactic acid	1	100 g
Methyl red	1	25 g
2-Methyl-8-quinolinol	1	200 g
Molybdenum (metal powder)	1	10 g
Molybdic acid	2	804 g
Morin	1	500 g
Myristic acid	2	800 g
1-Naphthol	1	100 g
1-Naphthol-4-sulfonic acid (sodium salt)	1	100 g
Naphthalene	1	100 g
N-1-Naphthylethylenediamine dihydrochloride	1	100 g
Neodymium nitrate	1	50 g
Neodymium oxide	1	50 g
Nickel (metal)	2	15 g
Nickel monoxide	1	2,268 g
Nickel nitrate (hexahydrate)	5	4,560 g
Nickelous sulfate (nickel II sulfate) hexahydrate	2	850 g
5-Nitrobarbituric acid	1	50 g
3-Nitrophthalic anhydride	1	25 g
1-Nitroso-2-naphthol-3,6-disulfonic acid disodium salt	1	50 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 8 of 13)

Chemical name	Number of containers	Total amount
N-Nitrosodibutylamine	1	25 g
Oleic Acid	1	600 g
Oxalic Acid (dihydrate)	10	4,108 g
Palladium	1	10 g
Palladium nitrate	3	75 g
Palladium oxide	1	100 g
Palmitic acid	1	75 g
2,4-Pentanedione dioxime	1	10 g
1,10-Phenanthroline	3	15 g
1,10-Phenanthroline ferrous sulfate Complex (0.025M solution Ferroin)	1	1 oz
Phenolphthalein	1	100 g
N-Phenylbenzohydromic acid	1	10 g
p-Phenylenediamine	2	200 g
N-Phenylmorpholine	1	100 g
p-bis-2-2-Phenylloxazolylbenzene (POPOP)	1	25 g
Phthalic anhydride	1	500 g
4-Phenylphenol	1	1,000 g
Phosphoric Acid (anhydride) pentoxyde	1	125 g
Phosphotungstic acid, sodium salt	13	5,384 g
Polyvinyl alcohol	1	1 L
Potassium acetate	3	1,362 g
Potassium antimonate	1	500 g
Potassium biphthalate	1	100 g
Potassium bisulfate	1	350 g
Potassium bromate	1	454 g
Potassium bromide	1	454 g
Potassium carbonate (anhydrous)	8	3,632 g
Potassium chlorate	1	454 g
Potassium chloride	5	2,253 g
Potassium chromate	1	400 g
Potassium citrate	1	200 g
Potassium cyanate	1	454 g
Potassium cyanide	2	500 g
Potassium dichromate	11	4,939 g
Potassium ferricyanide (anhydrous)	1	350 g
Potassium ferrocyanide (trihydrate)	1	300 g
Potassium fluoride (anhydrous)	6	2,608 g
Potassium fluoride (dihydrate)	2	908 g
Potassium hydroxide	9	6,755 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 9 of 13)

Chemical name	Number of containers	Total amount
Potassium iodate	1	400 g
Potassium iodide	1	1,204 g
Potassium nitrate	5	2,216 g
Potassium nitrite	5	2,500 g
Potassium oxalate	3	5,268 g
Potassium periodate	1	25 g
Potassium permanganate	16	7,010 g
Potassium persulfate	11	5,400 g
Potassium phosphate (dibasic)	4	1,816 g
Potassium phosphate (tribasic)	2	800 g
Potassium acid phthalate	2	200 g
Potassium pyrosulfate	6	2,770 g
Potassium sulfate (anhydrous)	4	5,600 g
Potassium tartrate	1	454 g
Potassium sodium tartrate	3	1,362 g
3-(2-Pyridyl)-5,6-diphenyl-1,2, 4-triazine PDT	1	100 g
2-(2-Pyridylazo)-5-diethyl- aminophenol zinc chloride complex	1	1 g
Pyrogallol red	1	1 g
1-Pyrrolidine carbodithioic acid (ammonium salt)	2	50 g
Quinaldine red	1	5 g
Quinalizarin	1	25 g
Quinoline (also 8-Quinoline) [Oxide Hydrate]	1	450 g
Rare earth carbonate (La,Nd)(CO ₃) ₃	1	230 g
Rare earth nitrate (La,Nd)(NO ₃) ₃	1	1,000 g
Rhodium oxide	1	1 g
Rhodium trichloride	2	1 g
Rubidium nitrate	2	45 g
Ruthenium III chloride	3	25 g
Ruthenium dioxide	1	3 g
Ruthenium nitrate	1	1 g
Ruthenium tetrachloride	1	25 g
Salicylic acid	2	908 g
Samarium nitrate (also Sm Trinitrate Hexahydrate)	3	1,175 g
Samarium oxide	1	100 g
Sand, sea (granular silica)	6	3,000 g
Selenium chloride	1	25 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 10 of 13)

Chemical name	Number of containers	Total amount
Semicarbazide hydrochloride	1	100 g
Silica (200 mesh)	1	1,362 g
Silica (325 mesh)	1	1,362 g
Silica gel (40-140 mesh)	1	1,724 g
Silica gel Indicating (6-16 mesh)	1	2,250 g
Silver iodate	1	100 g
Silver iodide	4	400 g
Silver nitrate	4	325 g
Silver nitrite	2	45 g
Silver oxide	1	25 g
Soda lime	1	2,330 g
Sodium (metal)	1	454 g
Sodium acetate (trihydrate)	2	554 g
Sodium aluminate	6	14,528 g
Sodium azide	1	300 g
Sodium benzoate	1	500 g
Sodium bicarbonate	13	5,494 g
Sodium bisulfate	1	200 g
Sodium (meta) bisulfite	4	1,404 g
Sodium bromate	3	1,362 g
Sodium borate (tetrahydrate)	1	453 g
Sodium borate (octahydrate)	1	453 g
Sodium borohydride	1	100 g
Sodium carbonate (anhydrous)	12	5,570 g
Sodium carbonate (monohydrate)	11	5,400 g
Sodium chloride	10	8,024 g
Sodium citrate	2	2,200 g
Sodium chromate	8	5,088 g
Sodium cobaltinitrinate	1	100 g
Sodium cyanide	3	600 g
Sodium dichromate	6	2,724 g
Sodium dithionite	1	90 g
Sodium ferricyanide	1	500 g
Sodium fluoride	5	1,858 g
Sodium fluorosilicate	1	453.6 g
Sodium formaldehyde-sulfoxylate	1	1,000 g
Sodium hydroxide	4	6,400 g
Sodium iodide	9	879 g
Sodium metaborate (anhydrous)	1	4,540 g
Sodium metaborate (octahydrate)	1	350 g
Sodium metabisulfate	5	250 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 11 of 13)

Chemical name	Number of containers	Total amount
Sodium molybdate	1	450 g
Sodium nitrate	13	28,576 g
Sodium nitrite	6	13,550 g
Sodium nitroprusside	1	100 g
Sodium oxalate (powder)	2	750 g
Sodium peroxide	2	600 g
Sodium persulfate	1	400 g
Sodium phosphate (dibasic heptahydrate)	10	4,032 g
Sodium phosphate (dibasic anhydrous)	3	1,058 g
Sodium phosphate (monobasic)	2	850 g
Sodium phosphate (tribasic, dodecahydrate)	20	9,582 g
Sodium pyrophosphate (decahydrate)	2	654 g
Sodium tripolyphosphate	1	450 g
Sodium salicylate	1	200 g
Sodium silicate (solution)	1	2,268 g
Sodium (meta) silicate (pentahydrate)	1	6,000 g
Sodium (meta) silicate (nonahydrate)	2	4,536 g
Sodium stannate	1	50 g
Sodium sulfate	5	14,600 g
Sodium sulfite	12	7,468 g
Sodium sulfide	9	4,086 g
Sodium tartrate (dihydrate)	5	6,362 g
Sodium tetraborate	1	4,540 g
Sodium tetraborate (decahydrate)	1	453.6 g
Sodium tetraphenylboron	1	100 g
Sodium thiosulfate (pentahydrate)	1	454 g
Sodium tungstate	1	400 g
Stannic oxide (tin IV oxide)	1	400 g
Stannous chloride (tin II chloride dihydrate)	1	400 g
Starch (amylum)	1	100 g
Stearic acid	1	1,000 g
Strontium carbonate	3	6,804 g
Strontium chloride (hexahydrate)	6	2,616 g
Strontium fluoride	1	1,000 g
Strontium nitrate	6	1,618 g
Strontium titanate	1	2,268 g
Succinic acid	1	500 g
Sucrose	1	3,500 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 12 of 13)

Chemical name	Number of containers	Total amount
Sulfamic acid	2	1,000 g
Sulfanilic acid	8	3,632 g
Sulfosalicylic acid	6	2,724 g
Sulfur	2	754 g
Tannic acid	1	1,000 g
Tantalum pentoxide (tantalum V oxide)	1	15 g
Tellurium (metal powder)	1	28 g
Tellurium dioxide (IV oxide)	1	10 g
p-Terphenyl	2	100 g
Tetrabutylammonium bromide	1	100 g
1-Tetradecanol	1	25 g
Tetramethylammonium bromide	1	400 g
Thallium(ic) oxide	1	25 g
Thiocarbohydrazide	1	25 g
Thyodene	1	100 g
Tin (metal)	3	470 g
Tin (metal foil)	1	100 g
Tin fluoride	1	50 g
Tin oxide IV	1	400 g
Titanium dioxide (IV oxide)	13	6,086 g
Trioctylphosphine oxide (TOPO)	4	95 g
2,4,6-Tripyridyl-s-triazine	1	2 g
Tris-hydroxymethylaminomethane	2	400 g
Tungstic acid	1	28 g
Urea	2	5,454 g
Vanadium chloride	1	25 g
Vanadium pentoxide (V Oxide)	1	400 g
Xylenol orange (tetrasodium salt)	3	10 g
Yttrium nitrate	1	25 g
Yttrium oxide	1	75 g
Zinc (metal)	7	3,178 g
Zinc (metal, mossy)	1	454 g
Zinc acetate	2	1,000 g
Zinc nitrate hexahydrate	1	500 g
Zinc oxide	1	04286 g
Zinc shot (scrap)	1	20 g
Zinc sulfate (heptahydrate)	1	200 g
Zirconium (metal)	2	647 g
Zirconium oxide powder (-35+100 mesh)	2	2,298 g
Zirconium oxide powder	1	100 g

Table A-2. 222-S Laboratory Chemical Stocks. (sheet 13 of 13)

Chemical name	Number of containers	Total amount
Zirconium sulfate	2	1,000 g
Zirconium tetrafluoride	1	250 g
Zirconium phosphate	1	100 g
Zirconyl nitrate	3	450 g

Table A-3. 222-SA Laboratory Chemical Stock. (sheet 1 of 3)

Chemical name	Number of containers	Total amount
Acetic acid, glacial	1	500 mL
Agar	1	5,000 g
Ethyl alcohol	1	250 mL
Methyl alcohol (anhydrous)	1	300 mL
Aluminum (granular)	1	450 g
Aluminum (shot)	2	4,000 g
Aluminum nitrate (nonahydrate)	8	4,000 g
Aluminum sulfate	1	500 g
Ammonium bicarbonate	1	453 g
Ammonium carbonate	1	300 g
Ammonium citrate (dibasic)	1	5,000 g
Ammonium fluoride	1	250 g
Ammonium nitrate	3	1,500 g
Ammonium oxalate	1	300 g
Ascarite II (SiO_2 coated with NaOH)	1	500 g
Ascorbic acid	2	400 g
Barium chloride	1	300 g
Barium nitrate	2	1,000 g
Bismuth phosphate	3	1,500 g
Boric acid	1	200 g
Calcium carbonate	1	300 g
Calcium chloride	1	400 g
Calcium fluoride	1	250 g
Calcium hydroxide	2	600 g
Calcium nitrate	2	600 g
Carbon tetrachloride	1	30 mL
Cesium nitrate	4	400 g
Chromic acid	1	NA
Chromium nitrate	1	300 g
Citric acid	2	500 g
Cobalt chloride	1	200 g
Cupric nitrate	1	100 g
Diatomaceous earth	1	100 g
5-(4-Dimethylaminobenzilidene)- -rhodanine	1	10 g
Dowex 1-X8, Dowex-1-chloride	1	450 g
EDTA (acid form)	6	2,400 g
EDTA disodium	3	150 g
EDTA tetrasodium	2	1,500 g
Ferric nitrate (iron III)	1	500 g
Ferric oxide (iron III)	2	800 g

Table A-3. 222-SA Laboratory Chemical Stock. (sheet 2 of 3)

Chemical name	Number of containers	Total amount
Ferric sulfate	1	100 g
Ferrous sulfate (Iron II)	1	100 g
Fluorescein	1	500 g
Fluorescein disodium salt, 2-hydrate	2	1,000 g
Glycolic acid	2	350 g
Hexane (HPLC grade)	1	100 mL
Hydrofluoric acid 48%	2	NA
Hydroxylamine hydrochloride	4	1,700 g
HEDTA trisodium salt	1	1,500 g
Iminodiacetic acid	1	400 g
Iodine	1	500 g
Iron (metal)	1	500 g
Lanthanum nitrate (hexahydrate)	3	1,200 g
Lead nitrate	8	4,000 g
Lithium metaborate	1	500 g
Magnesium hydroxide	3	700 g
Magnesium nitrate (hexahydrate)	1	300 g
Magnesium sulfate (anhydrous)	1	500 g
Manganese II nitrate 50%	1	300 g
Marble (CaCO_3 chips)	1	500 g
Mercury	2	235 mL
Mercury indicator	1	100 g
Mercurous nitrate	1	200 g
Methyl isobutyl ketone (hexone)	1	250 mL
Methyl red	1	25 g
Molybdenum trioxide (VI oxide)	1	170 g
Nickel nitrate	1	100 g
Nitriilotriacetic acid (trisodium)	1	500 g
Nitroethane	2	6,000 g
Normal paraffin hydrocarbon	1	50 mL
Oxalic acid	1	10 g
Potassium chromate	1	12 g
Potassium fluoride	4	1,600 g
Potassium hydroxide	2	600 g
Potassium iodide	1	100 g
Potassium nitrate	3	1,200 g
Potassium nitrite	1	300 g
Potassium permanganate	2	700 g
Potassium acid phthalate	1	100 g
Rare earth nitrate ($\text{La},\text{Nd}(\text{NO}_3)_3$)	1	250 g
Silica gel	1	500 g

Table A-3. 222-SA Laboratory Chemical Stock. (sheet 3 of 3)

Chemical name	Number of containers	Total amount
Silicic acid, N-hydrate	1	400 g
Soda & Lime (Na_2CO_3 & CaO)	1	2,500 g
Sodium acetate (trihydrate)	3	5,500 g
Sodium aluminate	1	1,500 g
Sodium borate (tetraborate, decahydrate)	1	500 g
Sodium carbonate	2	600 g
Sodium chloride	1	2,500 g
Sodium chloride	1	200 g
Sodium citrate	3	1,500 g
Sodium chromate	1	400 g
Sodium fluoride	1	250 g
Sodium hydroxide	2	800 g
Sodium iodide	1	250 g
Sodium Meta-bisulfate	2	1,000 g
Sodium nitrate	1	2,500 g
Sodium nitrite	2	193 kg
Sodium phosphate (dibasic, anhydrous)	3	1,500 g
Sodium phosphate (monobasic)	1	300 g
Sodium phosphate (tribasic, dodecahydrate)	2	500 g
Sodium sulfate	2	2,600 g
Sodium sulfite	1	500 g
Sodium sulfide, 9-hydrate	1	500 g
Sodium tartrate	2	1,000 g
Sodium thiosulfate	1	500 g
Starch (amylum)	2	500 g
Strontium fluoride	1	500 g
Sucrose	4	2,000 g
Sulfuric acid, ultrex	1	NA
Tributylphosphate (TBP)	1	50 mL
1,1,2-Trichlorotrifluoroethane	2	2 L
Triethanolamine	1	500 g
Tris(hydroxymethyl)aminoethane	1	300 g
Urea	1	500 g
Vanadyl sulfate trihydrate	2	50 g
p-Xylene	1	1 L
Zinc acetate	NA	NA
Zinc metal	1	500 g
Zinc chloride	1	50 mL
Zirconium nitrate	1	200 g

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 1 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	HSOS & CLASSIFICATION	C	P	MATERIAL	LOCATION	UNITS/SMC	TOTAL
17	ACETIC ACID	HC2H3O2	64-19-7	1003 CORROSIVE				HB 4	14259 ML	250 ML
578	ACETIC ACID GLACIAL	CH3COOH	64-19-7	1003 CORROSIVE FLAMMABLE				CAB 2 UNDER SINK	88502 ML	6500 ML
53	ACETONE	CH3COCH3	67-64-1	1005 FLAMMABLE				CAB 24-3	66800 ML	4500 ML
635	ACETONE	CH3COCH3	67-64-1	1005 FLAMMABLE				CAB 19-2	761 QT.	7 QUARTS
679	ACETONE (FOR NDEHP)	CH3COCH3	67-64-1	1005 FLAMMABLE				CAB 20-4	161 GAL	1 GALLON
283	ACETONITRILE	C#N#C	75-05-8	1006 FLAMMABLE POTSD	Y			CAB 24-1	46 4 LITER	24 LITER
652	ACETONITRILE	C#N#C	75-05-8	1006 FLAMMABLE POTSD	Y			CAB 19-3	264 LITER	8 LITERS
1332	ACETONITRILE	C#N#C	75-05-8	1006 FLAMMABLE POTSD	Y			CAB 24-3	261 LITER	8 LITER
1313	ACETONITRILE	C#N#C	75-05-8	1006 FLAMMABLE POTSD CORK	Y			60	664000 ML	24000 ML
1372	ALCOHOL	C2H5OH	64-17-5	1184 FLAMMABLE				BUCH TOP BY DENSITY METER	1820 ML	20 ML
631	ALCOHOL 33%	CH3CH2CH2CH3	5137-05-3	1737 FLAMMABLE POTSD				CAB 19-1	501 LITER	5 LITERS
1355	ALCOHOL 33% IN ETYLENE 15%			FLAMMABLE				CAB 24-1	34250 ML	750 ML
6119	ALIZARIN COMPLEXONE		3952-78-1	1907				CAB 13-1	265 GM / 161 GR	11 GR
1318	ALIZARIN MEBS SODIUM ALIZARIN SULFONATE 0.5%	C14H8O4	130-22-3	3646				CAB 37 ARCHIVE	18109 ML	100 ML
1121	ALIZARIN YELLOW R	HO2C6H4NH2C6H3OHSO3	2243-78-7	2631				CAB 13-1	1810 GR	10 GR
1129	ALIZARINE RED S	C14H8O4	130-22-3	3096						
426	ALKALINE HYPOCHLORITE							CAB 13-1	18100 GR	100 GR
1110	ALPHA KAPTONOL BENZENIM INDICATOR							CAB 37 ARCHIVE	18500 ML	500 ML
719	ALUMINUM	AL	7647-01-0	1012 CORROSIVE			10L HCL	CAB 23-3	1825 GR	25 GR
835	ALUMINUM	AL		CORROSIVE			2L KOH3	CAB 23-1	1850 ML	50 ML
881	ALUMINUM	AL		CORROSIVE			2L KOH3	CAB 22-3	28500 ML	1000 ML
1658	ALUMINUM	AL		CORROSIVE				CAB 23-3	1850 ML	500 ML
706	ALUMINUM (BISYS)	AL	7423-90-5	1014 FLAMMABLE				CAB 7-1	18137.2 EM	137.2 GR
781	ALUMINUM 3	AL3						CAB 37 ARCHIVE	68100 ML	600 ML
82	ALUMINUM CHLORIDE	AlCl3-6H2O	7784-13-4	2930 CORROSIVE				CAB 2-1	18500 GR	500 GR
138	ALUMINUM CHLORIDE	AlCl3-6H2O	7784-13-6	2930 CORROSIVE				CAB 2-0	18500 GR	4500 GR
1122	ALUMINUM CHLORIDE	AlCl3	7446-70-0	1014 CORROSIVE				CAB 36 ARCHIVE	58500 GR	2500 GR
1515	ALUMINUM CYCLOHEXANEKETYRATE	Al102C10H1720H	392518-31-4					74	185 GR	5 GR
763	ALUMINUM GRANULAR	AL	7129-10-1	1014 FLAMMABLE				CAB 7-1	1852.4 GR	52.4 GR
83	ALUMINUM NITRATE	Al(NO3)3-9H2O	7784-27-2	1018 OXIDIZER				CAB 2-1	185000 GR	7000 GR
381	ALUMINUM NITRATE	Al(NO3)3-9H2O	7784-27-2	1018 OXIDIZER				CAB 8-2	21800 GR	1000 GR
1032	ALUMINUM NITRATE	Al(NO3)3-9H2O	7784-27-2	1018 OXIDIZER				GESC 9	1825 GR	25 GR
1123	ALUMINUM NITRATE	Al(NO3)3-9H2O	7784-27-2	1018 OXIDIZER				CAB 31-1	18500 GR	900 GR
377	ALUMINUM OXIDE	Al2O3	1314-28-1	1019				CAB 8-1	1850 GR	50 GR
489	ALUMINUM OXIDE	Al2O3	1344-28-1	1019				CAB 36 ARCHIVE	185 GR	5 GR
303	ALUMINUM PURIFIED	AL	7429-50-5	1014 FLAMMABLE				CAB 36 ARCHIVE	18500 GR	500 GR
392	ALUMINUM PURIFIED (POWDER)	AL	7429-50-5	1014 FLAMMABLE				CAB 7-1	18500 GR	500 GR
212	ALUMINUM SULFATE	Al2(SO4)3-16H2O	7784-31-8	1022 OXIDIZER				CAB 2-2	18500 GR	1000 GR
213	ALUMINUM SULFATE	Al2(SO4)3-16H2O	7784-31-8	1022 OXIDIZER				CAB 2-1	150 500 GR	7500 GR
534	ALUMINUM SULFATE	Al2(SO4)3-16H2O	7784-31-8	1022 OXIDIZER				CAB 8-2	18500 GR	1500 GR
1126	ALUMINUM SULFATE	Al2(SO4)3-16H2O	7784-31-8	1022				CAB 31-1	28500 GR	1000 GR
704	ALUMINUM WIRE	AL	7429-50-5	1014 FLAMMABLE				CAB 7-1	1849 GR / 18.3 GR	47.3 GR
707	ALUMINUM WIRE	AL	7429-50-5	1014 FLAMMABLE				CAB 7-1	6852.5GR / 2821.4 GR	432.8 GR
731	ALUMINUM WIRE	AL	7429-50-5	1014 FLAMMABLE				CAB 7-3	28454 GR	66 GR
1180	ANEDAC-F				1727 CORROSIVE			CAB 13-1	1850 GR	50 GR
450	ANEELYST		33339-85-0	15011				CAB 37 ARCHIVE	18125 ML	125 ML
1559	ANILINO-2-2-HYDROXYKETIMYL-1,3-PROPANEOL	Na2C10H10O3	77-61-1	1910				CAB 4-1	18500 GR	500 GR
1182	ANILINO-4-4-CHLOROBIPHENYL HYDROCHLORIC	C12H10ClN						CAB 13-1	181 GR	4 GR
1183	ANILINO-8-2-NAPHTHALENE SULFOXIC ACID	H2NC10H8SO3H	119-28-8	1023				CAB 13-1	18100 GR	100 GR

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 2 of 35)

1124 ARKHONIUM THIOCYANATE	XR45CN	1767-95-4	1010		CAB 36 ARCHIVE	18500 GR	500 GR	
86 ARKHONIUM ACETATE	CH3COOKH	431-61-0	1026	FLAMMABLE	CAB 2-2	178500 GR	8500 GR	
307 ARKHONIUM ACETATE	CH3COOKH	431-61-0	1026	FLAMMABLE	CAB 8-2	38500 GR	1500 GR	
83 ARKHONIUM BIFLUORIDE	XHF-FF	1351-49-7	1027	POISON CORROSIV	CAB 36 ARCHIVE	28500 GR	1000 GR	
86 ARKHONIUM BISULFATE	XHHSO4	7803-43-6	2371	POISON CORROSIV	CAB 36 ARCHIVE	18100 GR / 18500 GR	800 GR	
1011 ARKHONIUM CHLOR STOCK	XK4				FIRE IN LAB DOOR BOX/TEN	16100 ML	100 ML	
87 ARKHONIUM CARBOHATE	XXKC03	10361-21-2	1028		CAB 36 ARCHIVE	2 & 500 GR	1000 GR	
157 ARKHONIUM CARBOHATE	XXKC03	10361-21-2	1028		CAB 2-8	161 KG	1 KG	
579 ARKHONIUM CARBOHATE	XXKC03	10361-21-2	1028		DESC 3	185 GR	5 GR	
139 ARKHONIUM CHLORIDE	XKCL	12125-02-9	1772		CAB 2-8	161 KG	1 KG	
219 ARKHONIUM CHLORIC	XKCL	12125-02-9	1772	CORROSIVE	CAB 2-3	208500 GR	1000 GR	
1022 ARKHONIUM CHLORIDE	XKCL	12125-02-9	1772		DESC 7	1850 GR	50 GR	
1162 ARKHONIUM CHLORIDE	XKCL	12125-02-9	1772		CAB 31-3	18500 GR	500 GR	
1510 ARKHONIUM CHLOROCHLORITE	XKHS23HCCL4-1	1/2020			74	2810 GR	20 GR	
216 ARKHONIUM CITRATE	XKH12HSCH07	3012-65-5	1030	OXIDIZER	CAB 2-4	18500 GR	7500 GR	
308 ARKHONIUM CITRATE	XKH12HCHE07	3012-65-5	1030	OXIDIZER	CAB 8-2	18500 GR	500 GR	
928 ARKHONIUM CITRATE	XKH12HCBS07	3012-65-5	1030	OXIDIZER	CAB 36 ARCHIVE	18500 GR	500 GR	
81 ARKHONIUM FLUORIDE	XHF	12125-01-0	1029	CORROSIVE	ON A FLOOR	482.5 KG	15 KG	
309 ARKHONIUM FLUORIDE	XHF	12125-01-0	1029	CORROSIVE	CAB 8-2	18500 GR	500 GR	
1920 ARKHONIUM METAFLUOROANTALATE(VI)	XKH12TAF6	33380-11-9		CORROSIVE	74	18250 GR	250 GR	
1521 ARKHONIUM METAFLUORTITRATE	XKH12TTF6	16942-44-4		CORROSIVE	74	18250 GR	250 GR	
84 ARKHONIUM NIMOXIDE	XKON	1371-21-6	1031	CORROSIVE	NO 83	18250 ML	250 ML	
1040 ARKHONIUM HYDROXYL NIMOFF	XKH101	1371-21-6	1031	CORROSIVE	FIRE IN LAB DOOR BOX/TEN	18100 ML	100 ML	
88 ARKHONIUM META-SULFATE	XKH107	7003-55-6	1678	POISON	CAB 2-1	38125 GR	375 GR	
83 ARKHONIUM POLYBONITE	XKH14H07024-XH20	12027-67-7	1032		CAB 2-4	48500 GR	2000 GR	
1163 ARKHONIUM POLYBONITE	XKH14H07024-XH20	12027-67-7	1032		CAB 31-1	18500 GR	500 GR	
50 ARKHONIUM NITRATE	XKCN03	4484-52-2	1033	OXIDIZER	CAB 2-4	98500 GR	4500 GR	
575 ARKHONIUM NITRATE	XKCN03	4484-52-2	1033	OXIDIZER	CAB 8-3	18500 GR	500 GR	
91 ARKHONIUM OXALATE	XKH12C204-H2O	4009-70-2	2730	POISON CORROSIV	CAB 2-5	74500 GR	3500 GR	
397 ARKHONIUM OXALATE	XKH12C204-H2O	4009-70-2	2730	POISON CORROSIV	CAB 8-3	18500 GR	500 GR	
493 ARKHONIUM OXALATE	XKH12C204-H2O	4009-70-2	2730	POISON CORROSIV	CNTN N END	181 LITER	1 LITER	
72 ARKHONIUM PERSULFATE	XKH12S208	7727-51-0	1077	CORROSIVE OXIDI	CAB 2-5	28500 GR	1000 GR	
14 ARKHONIUM PHOSPHATE	XKH12H04	2783-18-0	1030		CAB 36 ARCHIVE	18500 GR	500 GR	
146 ARKHONIUM PHOSPHATE	XKH12P04	2722-75-1	1033		CAB 2-8	182,280 KG	2,280 KG	
93 ARKHONIUM SULFATE	XKH12S06	7703-20-2	1000		CAB 2-5	78500 GR	3500 GR	
217 ARKHONIUM THIOCYANATE	XR45CN	1762-95-4	1010	POISON	CAB 2-5	85500 GR	4000 GR	
770 ARKHONIUM THIOCYANATE	XR45CN	1762-95-4	1010	POISON	CAB 37 ARCHIVE	28100 ML	200 ML	
1161 ARKHONIUM THIOCYANATE	XR45CN	1762-95-4	1010	POISON	CAB 31-3	18500 GR	500 GR	
93 ARKHONIUM ZIRCONIUM FLUORIDE	ZRKH412P6	16511-31-6			CAB 2-5	28500 GR	400 GR	
1551 ARPOLEEN PN					146	10820 ML	200 ML	
624 ANHYDROSTATE	CH3COOC5H11	428-13-7	1035	FLAMMABLE	CAB 19-1	185000 ML	5500 ML	
475 ANTHICNY	S8	7440-31-0	1982	POISON	CAB 12-2	48125 GR	500 GR	
543 ANTHICNY	S8	7440-31-0	1982	CORROSIVE	501 HCL	CAB 23-3	1850 ML	50 ML
760 ANTHICNY PONDER	S8	7440-31-0	1982	POISON	CAB 7-4	28125 GR / 18155 GR	570 GR	
1084 ARSENATE III	C22N18O14N52452	1548-60-4	1031	POISON	CAB 13-1	315 GR / 8100 GR	75 GR	
444 ARSENIC	S8	7440-31-0	1930	POISON	CAB 37 ARCHIVE	2850 ML	100 ML	
870 ARSENIC	S8	7440-31-0	1930	POISON	CAB 22-3	18500 ML	500 GR	
1049 ARSENIC	S8	7440-31-0	1930	POISON	CAB 27-3	2850 ML	100 ML	
501 ARSENIC OXIDE V	AS205	1305-28-2	1752	POISON	CAB 12-1	1825 GR	25 GR	
500 ARSENIC OXIDE III	AS203	1327-51-3	2231	POISON	CAB 12-1	18100 GR	100 GR	

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 3 of 35)

SEC.	COMMON NAME	FORMULA	CAS NUMBER	MSDS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
503	ARSENIC OXIDE TRIOXIDE	AS2O3	1327-53-3	2231 POISON	Y	Y		CAB 12-4	1850 GM	50 GM
1300	ARSENIC TRIOXIDE	(AS2O3)	1327-53-3	2231 POISON	Y			CAB 13-4	1825 GM	150 GM
951	ARSENIOUS OXIDE	AS2O3	1327-53-3	2231 POISON	Y			DESC 1	1825 GM	25 GM
1300	ARSENIOUS OXIDE	AS2O3	1327-53-3	2231 POISON	Y			DES II DENSITY BNCH TOP	1810 GM	10 GM
1448	ASCARITE		81132-20-2	POISON CORROSIV	Y			CAB 33-6	28500 GM	1000 GM
7	ASCORBIC ACID	C6H8O6	50-81-7	1045				BINCH TOP	201,25 GM	2.5 GM
96	ASCORBIC ACID	C6H8O6	50-81-7	1045				CAB 2-5	74500 GM	3500 GM
210	ASCORBIC ACID	C6H8O6	50-81-7	1045				CAB 3-7	68500 GM	3600 GM
502	ASCORBIC ACID	C6H8O6	50-81-7	1045				CAB 15	18300 GM	500 GM
1125	ASCORBIC ACID	C6H8O6	50-81-7	1045				CAB 31-1	28500 GM	1000 GM
1161	ASCORBIC ACID	C6H8O6	50-81-7	1045				CAB 31-3	18500 GM	500 GM
1408	ASCORBIC ACID	C6H8O6	50-81-7	1045		S1		CAB 34-4	982 GM	16 GM
516	BAKING SODA	NaHCO3						KITCHEN FRIG	1116 OZ.	16 OZ.
97	BARBITURIC ACID	C4H10N2O3	67-52-7	1283				CAB 2-6	38100 GM	360 GM
1157	BARBITURIC ACID	C4H10N2O3	67-52-7	1283				CAB 31-3	18500 GM	360 GM
476	BARIUM	BA						CAB 37 ARCHIVE	18500 XL	500 XL
748	BARIUM	BA						CAB 37 ARCHIVE	18500 XL	500 XL
815	BARIUM	BA	7647-01-0					CAB 23-3	18500 XL	50 XL
836	BARIUM	BA						CAB 23-4	28500 XL	1000 XL
883	BARIUM	BA						CAB 22-3	18500 XL	500 XL
1575	BARIUM	BA						CAB 23-3	18500 XL	50 XL
101	BARIUM ACETATE	BA(C2H3O2)	543-80-6	1933				CAB 34 ARCHIVE	18100 GM	100 GM
49	BARIUM CARBONATE	BACO3	513-77-6	1947	POISON			CAB 2-6	24500 GM	1000 GM
1013	BARIUM CARBONATE	BACO3	513-77-6	1947	POISON			DESC 5	1825 GM	25 GM
98	BARIUM CHLORIDE	BACl2-2H2O	10361-37-2	1812	POISON			CAB 2-6	188,500 GM	8000 GM
420	BARIUM CHLORIDE	BACl2-2H2O	10361-37-2	1812	POISON			CAB 4-3	258500 GM	14500 GM
1319	BARIUM CHLORIDE	BACl2-H2O	10361-37-2	1812	POISON			CAB 37 ARCHIVE	18100 XL	100 XL
370	BARIUM CHLORIDE 10%	BACl2	10361-37-2	1812	POISON			CAB 17	1850 XL	50 XL
1001	BARIUM CHLORIDE DIHYDRATE	BA(Cl2-2H2O)	10326-27-9	1755	POISON			DESC 4	1825 GM	25 GM
1523	BARIUM CYCLOCETAMIDE BUTYRATE	BA(OC(=O)CH2)2	62669-65-2					74	185 GM	5 GM
1187	BARIUM DIPHENYLARANESULFONATE	BA(SO3C6H5)2HgC6H5	6211-24-1	1710				CAB 13-1	2850 GM	100 GM
102	BARIUM HYDROXIDE	BA(OH)2-8H2O	17194-00-2	2169	POISON			CAB 36 ARCHIVE	28500 GM	1000 GM
100	BARIUM IODATE	BA(I03)2			POISON			CAB 2-6	28100 GM	200 GM
103	BARIUM NITRATE	BA(H03)2	10022-31-8	1018	POISON OXIDIZER			CAB 36 ARCHIVE	18500 GM / 18250	750 GM
1379	BARIUM NITRATE	BA(H03)2	10022-31-8	1049				DES II DENSITY BNCH TOP	18100 GM	100 GM
105	BENZOIC ACID	C6H5COOH	65-85-0	2069				CAB 2-6	18125 GM	500 GM
909	BENZOIC ACID	C6H5COOH	65-85-0	2069				DESC 3	1820 GM	20 GM
1128	BENZOIC ACID	C6H5COOH	65-85-0	2069				CAB 31-1	181 LBS	1 LBS
1188	BENZOIN ANTI-OXIDE	C6H5C(CH3)(CH2)C6H5	441-38-3	1053				CAB 13-1	2225 GM	50 GM
412	BERILLIUM	BE						CAB 23-3	1850 XL	50 XL
693	BERILLIUM	BE						CAB 22-3	18500 XL	500 XL
1113	BERILLIUM	BE						CAB 23-4	18500 XL	500 XL
104	BERILLIUM SULFATE	BE(SO4-4 H2O	13516-49-1	2181	POISON	Y		CAB 36 ARCHIVE	1825 GM	25 GM
816	BISMUTH	BI	7697-37-2		CORROSIVE		S1 HNO3	CAB 23-3	18500 XL	500 XL
855	BISMUTH	BI	7697-37-2		CORROSIVE		S1 HNO3	CAB 23-4	18500 XL	500 XL
872	BISMUTH	BI	7697-37-2		CORROSIVE		S1 HNO3	CAB 22-3	18500 XL	500 XL
763	BISMUTH KETAL	BI	740-49-9	1858	FLAMMABLE SOLID			CAB 7-1	18100 GM / 1850 GM 453.6 GM	603.6 GM
107	BISMUTH NITRATE	BI(H03)2-3H2O	10935-06-0	2318	OXIDIZ			CAB 36 ARCHIVE	18250 GM	250 GM
482	BISMUTH OXIDE	BI2O3	1304-76-3	2165				CAB 36 ARCHIVE	182 GM	2 GM
108	BISMUTH OXY CHLORIDE	BiOCL	7787-57-1					CAB 2-6	18100 GM	100 GM

WHC-EP-0342 Addendum 13 08/31/900
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 4 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	HSDS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
728	BISMUTH RUGS		81	740-69-9	1658		FLAMMABLE SOLID	CAB 7-3	10250 GM	250 GM
106	BISMUTH SINITRATE		PI0K03-4H2O	10371-45-3	3057		DODIICER	CAB 36 ARCHIVE	1650 GM	50 GM
109	BISMUTH SULFATE		B1253				POISON	CAB 36 ARCHIVE	16100 GM	100 GM
110	BISMUTH TRICHLORIDE		B1C13					CAB 36 ARCHIVE	16100 GM	100 GM
1204	BORAX		HA2B4O2-10H2O					CAB 13-4	3810 GM / 48100 GM	450 GM
111	BORIC ACID		H3BO3	10043-35-3	1061			CAB 2-6	68500 GM	3500 GM
112	BORIC ACID		H3BO3	10043-35-3	1061			CAB 2-7	78500 GM	3500 GM
1127	BORIC ACID		H3BO3	10043-35-3	1061			CAB 31-1	32500 GM	1500 GM
1406	BORIC ACID		H3BO3	10043-35-3	1061			CAB 31-3	50250 ML	1250 ML
19	BARON							CAB 23-4	18500 ML	500 ML
822	BOSOM							CAB 23-5	48500 ML	200 ML
877	BOSOM							CAB 22-2	14500 ML	500 ML
745	BROXIDE STANDARD		BK					CAB 37 ARCHIVE	18500 ML	500 ML
515	BFCM02-'5-PYRIDYLAI-2-S-(DIETHYLAMINO) PHENOL			14337-53-2				CAB 13-1	565 GM	5 GM
1074	BRONCHRESOL GREEN		C21H14Br4O5S	78-10-1	1986			CAB 37 ARCHIVE	18100 ML	100 ML
1181	BRONCHRESOL GREEN		C21H14Br4O5S	78-10-1	1986			CAB 13-1	1815 GM / 1810 GM / 105 GM	10 GM
1281	BRONCHRESOL GREEN			78-10-1	1986			CAB 13-3	365 GM	15 GM
1212	BRONCHRESOL PURPLE		C21H14Br4O2SS	115-40-2	1067			CAB 13-1	381 GM / 1810 GM	11 GM
1282	BRONCHRESOL PURPLE		C21H14Br4O2SS	115-40-2	1067			CAB 13-3	205 GM	10 GM
522	BRONCHFORM		CHBr3	75-25-2	1069	POTISON		A1	5450 GM	450 GM
1039	BRONCHOTHYDOL BLUE		C27H28Br2O5S	76-51-5	3005			CAB 37 ARCHIVE	18250 ML / 18125 ML	375 ML
1190	BRONCHOTHYDOL BLUE		C27H28Br2O5S	76-51-5	3005			CAB 13-1	415 GM	10 GM
1262	DEMONTHYDOL BLUE		C27H25BrP2O5S	76-51-5	3255			CAB 13-3	945 GM / 1810 GM	55 GM
1317	DEMONTHYDOL BLUE 12		C27H25Br2O5S	76-51-5	3005			CAB 31-6	18100 ML	100 ML
150	BRUCINE SULFATE		IC23H28N2O412K2SO4-7	3787-60-8	1768	POTISON	SOL ETHANOL	CAB 2-7	1825 GM	25 GM
			H2O							
1509	BUFFER CALIS. PH 4							CAB 26-3	68500 ML	3000 ML
1016	BUFFER HARDNESS							CAB 37 ARCHIVE	181 LITER	1 LITER
1137	BUFFER HARDNESS REAGENT							CAB 36 ARCHIVE	16500 GM	500 GM
1315	BUFFER PH 1.4							CAB 37 ARCHIVE	18100 ML	100 ML
1314	BUFFER PH 10							CAB 37	38500 ML	1500 ML
1510	BUFFER PH 10							CAB 26-3	71500 ML	3500 ML
584	BUFFER PH 10 CALIS.							CAB 16	18500 ML	500 ML
1316	BUFFER PH 12.6							CAB 37 ARCHIVE	18100 ML	100 ML
587	BUFFER PH 4							CAB 16	68500 ML	2000 ML
1303	BUFFER PH 4							CAB 37 ARCHIVE	68500 ML	3000 ML
1312	BUFFER PH 7							CAB 37 ARCHIVE	38500 ML	1500 ML
1511	BUFFER PH 7							CAB 26-3	52500 ML	2500 ML
6	BUFFER SOL'N PH 10							CAB 33-1	58500 ML / 18100 ML	2600 ML
20	BUFFER SOL'N PH 7							CAB 33-1	68500 ML	3000 ML
1519	BUFFER TABLETS							136		
1550	BUFFER TABLETS							146		
1636	BIG SPRAY							60CK		
1236	C-PURIFLUBITONE			(COCl:CHCl(Cl)(CHCl)Cl) 522-27-0	2064			CAB 13-2	1813 OZ	13 OZ
				:N(Cl)C(Cl):CH(Cl)Cl					165 GM / 301 GM	8 GM
702	CARMIUM		CO	7440-13-9	2232	POTISON	Y	CAB 7-1	18453.6 GM	433.6 GM
918	CARMIUM		CO	7697-37-2		CORROSIVE	Y	101 KHO3	1650 ML	50 ML
919	CARMIUM		CO	7697-37-2		CORROSIVE	Y	21 KHO3	18500 ML	500 ML
985	CARMIUM		CO	7697-37-2		CORROSIVE		21 KHO3	18500 ML	500 ML
1083	CARMIUM							H2O	1850 ML	50 ML

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 5 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	HSDS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
1347	CARMIUM	CB	7697-37-2	CORROSIVE	Y		2% HNO3	CAB 37 ARCHIVE	18500 ML	500 KL
116	CARMICH ACETATE	CH3(COO)2CO-2H2O	5743-01-4	POISON	Y			CAB 2-7	18500 GH	500 GH
113	CARMICH CHLORIDE	COCl2-2 1/2 H2O	10108-61-2	1081 POISON	Y			CAB 36 ARCHIVE	18500 GH	500 GH
114	CARMICH IODIDE	COI2	7790-80-9	2091 POISON	Y			CAB 2-7	28125 GH	250 GH
761	CARMIUM METAL HOSSY	CB	7440-43-9	2232 POISON	Y			CAB 7-1	18500 GH / 1840 GH	50 GH
392	CARMIUM NITRATE	CB(NO3)2-4H2O	10325-91-7	2370 OXIDIZER	Y			CAB 6-3	18500 GH	500 GH
761	CARMIUM FOSFOR	CB	7440-43-9	2232 POISON	Y			CAB 7-1	18100 GH / 4025 GH	200 GH
760	CARMIUM SHOT-TEARDROP	CB	7440-43-9	2232 POISON	Y			CAB 7-1	38100 GH / 6850 GH	400 GH
115	CARMIUM SULFATE	SCDSO4-8H2O	10124-36-1	POISON	Y			CAB 2-7	18500 GH	500 GH
1207	CALCEIN		1461-15-0	2369				CAB 15-1	185 GH	5 GH
374	CALCIUM	CA					H2O	CAB 37 ARCHIVE	18125 ML	125 KL
673	CALCIUM	CA		CORROSIVE	2%		HNO3	CAB 37 ARCHIVE	28500 ML	1000 KL
703	CALCIUM	CA		CORROSIVE	2%		HCL	CAB 37 ARCHIVE	38100 ML	300 KL
763	CALCIUM	CA		CORROSIVE	2%		HNO3	CAB 37 ARCHIVE	18500 GH	500 GH
837	CALCIUM	CA		CORROSIVE	2%		HCL	CAB 22-4	28500 GH	1000 GH
881	CALCIUM	CA		CORROSIVE	2%		HNO3	CAB 22-3	18500 GH	500 GH
1571	CALCIUM	CA	7647-81-0	CORROSIVE	10%		HCL	CAB 23-3	28500 GH	100 GH
1522	CALCIUM 2-ETHYLHEXANOATE	CA(OC2H5)2H512	136-51-6					74	185 GH	5 GH
117	CALCIUM CARBONATE	CaCO3	471-31-1	1086				CAB 2-7	71500 GH	3500 GH
118	CALCIUM CARBONATE	CaCO3	471-31-1	1086				CAB 36 ARCHIVE	18100 GH	100 GH
477	CALCIUM CARBONATE	CaCO3	471-31-1	1086				CAB 12-2	48500 GH / 1825 GH	3925 GH
480	CALCIUM CARBONATE	CaCO3	471-31-1	1086				DESC 1	185 KG	5 KG
983	CALCIUM CARBONATE	CaCO3	471-31-1	1086				DESC 3	1820 GH / 1850 GH	70 GH
1524	CALCIUM CARBONATE	CaCO3	471-31-1	1086				CAB 12-2	28100 GH	200 GH
370	CALCIUM CHLORIDE	CaCl2	10043-52-4	1687				CAB 9-3	18500 GH	500 GH
421	CALCIUM CHLORIDE	CaCl2	10043-52-4	1097				CAB 36 ARCHIVE	382500 GH	7500 GH
1028	CALCIUM CHLORIDE	CaCl2	10043-52-4	1087				DESC 8	1815 GH	15 GH
319	CALCIUM FLUORIDE	CaF2	7789-75-5	1088				CAB 8-6	18500 GH	500 GH
119	CALCIUM HYDROXIDE	Ca(OH)2	1305-62-0	1607 CORROSIVE				CAB 36 ARCHIVE	18200 GH	200 GH
318	CALCIUM NITRATE	Ca(NO3)2-4H2O	12477-31-1	1090 OXIDIZER				CAB 6-3	121500 GH	4000 GH
1030	CALCIUM NITRATE	Ca(NO3)2-4H2O	12477-31-1	1070 OXIDIZER				DESC 9	1825 GH	25 GH
120	CALCIUM OXIDE	CaO	1305-70-8	2118				CAB 34 ARCHIVE	18500 GH / 185 GH	505 GH
121	CALCIUM SULFATE	CaSO4-2H2O	7778-19-1	1091				CAB 36 ARCHIVE	18500 GH	500 GH
1206	CALCOCHROME BLACK T							CAB 13-1	18100 GH	100 GH
683	CARBON TETRACHLORIDE	CCl4	56-23-5	1102 POISON FLAMMABLE	Y	Y		CAB 20-5	484 LITERS	16 LITERS
1208	CARMINIC ACID	C22H20O13	1266-17-1					CAB 13-1	1810 GH	20 GH
1042	CATHETYLAMINO BENZYLIDENE-RHODAMINO-5	C12H12N2S2O					FLAMMABLE	CAB 27-3	18500 ML	500 KL
1156	CEDTA	C6H16N4(CH2COO)2]2-H2O						CAB 31-3	18100 GH	
1367	CERIC	CE						N2504 1 M	153	510 LITER
1368	CERIC	CE						.459 M	153	140 LITER
73	CERIC	CE						.1 M N2504	140 GH TOP BY DENSITY METER	140 LITER
74	CERIC	CE						.1 M N2504	140 GH TOP BY DENSITY METER	925 KL
18	CERIC AMMONIUM NITRATE	(NH4)2Ce(HCO3)6	16774-21-3	1109 OXIDIZER				CAB 2-6	121500 GH	4000 GH
40	CERIC AMMONIUM NITRATE	(NH4)2Ce(HCO3)6	16774-21-3	1109 OXIDIZER CORROS				CAB 31-3	18500 GH	500 GH
12	CERIC AMMONIUM SULFATE	CE(H4N4)(SO4)4-2H2O	13810-01-5	1600				CAB 31 ARCHIVE	18500 GH	500 GH
16	CERIC OXIDE	CEO2	1306-38-3	1112 POISON				CAB 12-5	185 GH	5 GH
13	CERIC SULFATE	CE(SO4)4	13810-01-5	1113 CORROSIVE OXIDI				CAB 31 ARCHIVE	21500 GH	1000 GH
18	CERIC SULFATE SOL'N	H4Ce(SO4)4						CAB 22-5	421 GALLON	4 GALLONS
16	CERIC SULFATE SOL'N	H4Ce(SO4)4						CAB 22-6	265 PTS	10 PTS

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 6 of 35)

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 7 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	MSDS & CLASSIFICATION	C P MATRIX	LOCATION	UNITS/SIZE	TOTAL
938	CITRIC ACID	HOC(OOH)(CH2COOH)2- 5949-29-1	2712			CAB 36 ARCHIVE	182.5 KG	2.5 KG
		H2O						
1571	CLEAVER AIR FRESHNER					CAB 21-7	1813 QT.	13 QT.
551	CLEAVER AIR FRESHNER					STOCKROOM	1813 QT.	104 QT.
548	CLEAVER AIR FRESHNER					WOMENS BATHROOM	1813 QT.	13 QT.
532	CLEAVER AJAX					CAB 52	1814 QT.	14 QT.
518	CLEAVER AJAX					STOCKROOM	7614 QT.	42 QT.
531	CLEAVER ALCONOL DETERGENT					CAB 52	1825 LBS	25 LBS
511	CLEAVER ALL PURPOSE					UNDER KITCHEN SINK	181 QT.	1 QT.
542	CLEAVER ALL PURPOSE					UNDER KITCHEN SINK	181 QT.	1 QT.
1576	CLEAVER AXO POLISH					CAB 21-7	1814 QT.	14 QT.
557	CLEAVER BLUE BOWL CLEANER					STOCKROOM	281 QT.	2 QT.
547	CLEAVER BLUE BOWL CLEANER					WOMENS BATHROOM	181 QT.	1 QT.
546	CLEAVER BLUE CLEANER					STOCKROOM	181 QT.	1 QT.
539	CLEAVER BRASSO METAL POLISH					UNDER KITCHEN SINK	181 QT.	0 QT.
510	CLEAVER BRAVO KAT STRIPPER					STOCKROOM	1825 QT.	25 QT.
510	CLEAVER BETSOL DETERGENT SOLVENT					UNDER KITCHEN SINK	181 QT.	1 QT.
559	CLEAVER DISINFECTANT					STOCKROOM	181 GAL	1 GAL
515	CLEAVER EASY OFF OVEN CLEANER					UNDER KITCHEN SINK	281 QT.	16 QT.
547	CLEAVER EXPO WHITE TOBAG					OFFICE	281 QT.	16 QT.
1595	CLEAVER FREON T-P33 SOLVENT					CAB 21-7	1814 QT.	14 QT.
1597	CLEAVER FURNITURE CLEANER TASK MASTER					CAB 21-7	1810 QT./1814 QT.	50 QT.
559	CLEAVER FURNITURE POLISH					STOCKROOM	1818 QT.	16 QT.
551	CLEAVER FURNITURE POLISH					STOCKROOM	1819 QT.	15 QT.
555	CLEAVER GLASS					STOCKROOM	1819 QT.	152 QT.
545	CLEAVER GLASS					STOCKROOM	1819 QT.	19 QT.
1574	CLEAVER GLASS CLEANERS					CAB 21-7	1819 QT./1815 QT./2819 QT.	72 QT.
516	CLEAVER HAND CREAM					KITCHEN LOCKER	188 QT.	0 QT.
1598	CLEAVER LIQUID					CAB 21-7	18200 ML/18500 ML	700 ML
1599	CLEAVER LIQUID WAT					CAB 21-7	181000 ML / 183000 ML	1350 ML
	S CLEAVER MICRO SOAP					143	28500	1600 ML
592	CLEAVER MICRO SOAP					CAB 17	18500 ML	360 ML
533	CLEAVER MINT AIR FRESHNER					STOCKROOM	3816 QT.	48 QT.
549	CLEAVER MINT AIR FRESHNER					WOMENS BATHROOM	1816 QT.	16 QT.
550	CLEAVER MISTY PYNE					STOCKROOM	1816 QT.	2 QT.
549	CLEAVER PINK CREAM					STOCKROOM	181 QT.	1 QT.
541	CLEAVER SPIC AND SPAN					STOCKROOM	1854 QT.	54 QT.
554	CLEAVER SUPER CREAM BOWL CLEANER					STOCKROOM	281 QT.	2 QT.
538	CLEAVER SWEETHEART DISH SOAP					UNDER KITCHEN SINK	2822 QT.	44 QT.
552	CLEAVER TOTAL PERFORMANCE DEGREASER					STOCKROOM	381 QT.	3 815
1115	CLEAVER WHI'E BOARD					CAB 32-2	18250 ML	250 ML
634	CHFO	C24H42HO2P	8324-95-1	2556 CORROSIVE		CAB 19-2	181 LB	1 LB
635	CHFO	C24H12HO2P	8324-95-1	2556 CORROSIVE		CAB 19-2	18120 GM	120 GM
250	CHFO .2M / 1.4 TSP/H2O					CAB 24-2	18250 NL	250 NL
411	CHFO .32M / 1.4K TSP/H2O					CAB 24-1	18250 NL	250 NL
817	COPALT	CO	7697-37-2	CORROSIVE	101 KHOS	CAB 23-3	1850 ML	50 ML
816	COPALT	CO		CORROSIVE	23 KHOS	CAB 23-4	28500 ML	1000 ML
1027	COPALT	CO				CAB 23-3	1850 ML	50 ML
131	COPALT CHLORIDE	COCL2	7791-13-1	1137- POISON		CAB 36 ARCHIVE	18100 GM	100 GM
1327	COPALT CYCLOHEXANEUVRATE	CO(OC10H17)2				74	185 GM	5 GM

9 10 11 12 13 14

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 8 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	ASDS I CLASSIFICATION	L	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
762	COBALT METAL	CO	7440-18-4	2002 FLAMMABLE				CAB 7-1	10453 GH	453 GH
1352	COBALT NITRATE	CO(NO3)2·6H2O	10141-22-9	2004 OXIDIZER			H2O	CAB 3-1	48250 GH	1000 GH
1350	COBALT NITRATE	CO(NO3)2	10141-05-6	2003				CAB 37 ARCHIVE	1025 ML	25 ML
131	COBALTOUS CHLORIDE	COCL2	7646-79-9	2001				CAB 36 ARCHIVE	18100 GH	100 GH
32	COLLODION		9004-70-0	2005 FLAMMABLE POISON				FRIG	4541000 ML	45000 ML
138	COLLODION		9004-70-0	2005 POISON FLAMMABLE				CAB 19-2	3850000 ML	15000 ML
1404	COMPLEXING AGENT							CAB 34-3	4050000 ML	20000 ML
1211	COPPER RED		C33H22N4Na20152	573-58-0	2006		POISON	CAB 13-1	2810 GH	20 GH
647	COPPER	CU					CORROSIVE	CAB 25-3	1050 GH	50 GH
781	COPPER	CU					CORROSIVE	CAB 37 ARCHIVE	58100 GH	500 GH
811	COPPER	CU					CORROSIVE	CAB 25-4	28500 GH	1000 GH
876	COPPER	CU					CORROSIVE	CAB 37 ARCHIVE	10500 GH	500 GH
343	COPPER 2	CU					CORROSIVE	CAB 37 ARCHIVE	181000 GH	1000 GH
1516	COPPER CYCLOHEXANE BUTRATE		CU(OC2H10)2H1712					71	105 GH	5 GH
418	COPPER IODIDE	CUI		7481-65-4				CAB 12-4	18100 GH	100 GH
768	COPPER NITRATE HYDRATE	CU(NO3)2	19004-19-1	1141 OXIDIZER				FRIG	1025 GH	200 GH
1162	CUPFER SALT	CU					CORROSIVE	CAB 37 ARCHIVE	18500 GH	500 GH
659	COPPER WIRE	CU		7440-50-8	2371			CAB 7-1	1810 GH/1825GH/1850GH/1820 GH	40 GH
743	COPPER WIRE	CU		7440-50-8	2371			CAB 7-1	1810 GH (1,5 MEIERS)	10 GH
1091	CRESOL PURPLE .1MM			2392-01-7				CAB 37 ARCHIVE	1050 GH	50 GH
1214	CRESOL RED	C21H18O5S	1733-12-4	2217				CAB 13-1	105 GH / 1825 GH	10 GH
1251	CRESOL-N PURPLE SODIUM SALT	C21H17NaO5S	4225-31-1					CAB 13-2	1810 GH	10 GH
1289	CRESOL-N PURPLE SODIUM SALT	C21H17NaO5S	22475-31-1					CAB 13-3	2810 GH	20 GH
1215	CRISTAL VIOLET		548-62-1	2697			POISON	CAB 13-1	1825 GH	25 GH
40	CUFFERON	C6H5Cl(OC6H4)2Cl	135-20-1	1673			POISON	FRIG	18125 GH	125 GH
146	CUFFERON	C6H5Cl(OC6H4)2Cl	135-20-1	1673			POISON	CAB 3-1	18100 GH	100 GH
1184	CUFFERON	C6H5Cl(OC6H4)2Cl	135-20-1	1673			POISON	CAB 13-1	28100 GH	200 GH
133	CUPRIC CARBONATE	CU(OH)2	1081-14-1	2010			POISON	CAB 36 ARCHIVE	18100 GH	1500 GH
136	CUPRIC CHLORIDE	CUCl2·2H2O	7447-39-1	1672			POISON	CAB 36 ARCHIVE	31500 GH	1500 GH
135	CUPRIC CHLORIDE	CUCl2·2H2O	7447-39-1	1672			POISON	CAB 3-1	18500 GH	500 GH
136	CUPRIC NITRATE	CU(NO3)2·3H2O	3251-23-8	1141			POISON	CAB 36 ARCHIVE	18100 GH	100 GH
143	CUPRIC SULFATE	CUSO4·5H2O	7738-19-8	1143			POISON	CAB 36 ARCHIVE	18500 GH	500 GH
145	CUPRIC SULFATE	CUSO4·5H2O	7738-19-8	1143			POISON	CAB 3-1	28500 GH	1000 GH
103	CUPRIC SULFIDE	CUS	1317-10-1	2879			POISON	CAB 36 ARCHIVE	18500 GH	500 GH
1063	CUPRIC SULFIDE	CUS	1317-10-1	2879			POISON	DESC 5	18100 GH	100 GH
147	CUPROUS CHLORIDE	CUCl	7750-89-3	1757			POISON	CAB 36 ARCHIVE	48500 GH	2000 GH
148	CUPROUS OXIDE	CU2O	1317-19-1	1144			POISON	CAB 3-1	18125 GH	125 GH
1577	CYANINE RINSE	KCN					POISON	HO 3	28500 GH / 100 LITER	5 LITER
49	CYCLOHEXANE	CH2(CH2)4CH2	110-82-7	1145			FLAMMABLE	CAB 24-1	404 LITER	16 LITER
153	CYCLOHEXANE	CH2(CH2)4CH2	110-82-7	1145			FLAMMABLE	CAB 19-5	684 LITER	24 LITER
1515	CYCLOHEXANE BUTRATE							74	105 GH	5 GH
1230	D-XYLITOL	C6H14O6	65-65-8					CAB 13-2	10250 GH	250 GH
149	DAVARDA'S ALLOY		8640-11-1	1971			FLAMMABLE SOLID	CAB 36 ARCHIVE	18100 GH	100 GH
648	DECANE	C6H14	124-10-5	1916				CAB 20-3	18100 GH	100 GH
1227	DEPTOZINE							CAB 13-2	181 GH	1 GH
1216	DESICOTE							CAB 13-1	1050 GH	50 GH
675	DI-(2-ETHYLHEXYL)PHOSPHORIC ACID	(CH3(CH2)3CH(C2H5)CH2)2O7P	298-07-7				CORROSIVE	CAB 20-4	102 KG / 48500 GH	102 KG / 48500 GH
1105	DI-2-METHYLTHIOPROPIONIC ACID	20212P(O)(OH)2						CAB 13-1	1810 GH	10 GH
644	DI-BUTYL BUTYL PHOSPHATE	C6H18O4						CAB 19-4	181 LITER	4 LITER

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 9 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	MSDS #	CLASSIFICATION	C	P	KATAII	LOCATION	UNITS/SIZE	TOTAL
478	DI-N-BUTYL-.N-DIETHYLCARBAMOYL PHOSPHONATE	(CH ₃ CH ₂ O) ₂ PO(COOC(CH ₂ H ₅) ₂) ₂	2439-69-2						CAB 20-4	181 GAL	1 GALLON
1217	DIAMINOBIPHENYL SULFONE	(CH ₂ NHAr) ₂ S(=O)2	80-08-0						CAB 13-1	18100 GM	100 GM
1269	DICHLORO-4-NOPHENOL SODIUM SALT 2,6	O:CH(Cl)Cl2CH ₂ CH ₂ OH ₂ A	620-15-1	1706					CAB 13-1	1810 GM	10 GM
1191	DICHLORODIOXORESCIN	2'-,7'-HOOCCH ₂ CH ₂ CO ₂ H	76-54-0	1160	-2'-+O-2'-CLOC ₂ H ₂ -8'- OH-7'-CL				CAB 13-1	185 GM	5 GM
1258	DIETHYLALANINE-4-BENZALDEHYDE	(CH ₂ H ₅) ₂ NC ₆ H ₅ CHO	120-21-8						CAB 13-3	5E100 GM	
1192	DIETHYLDITHIOCARBAMIC ACID SODIUM SALT	(C ₂ H ₅) ₂ NCS ₂ H ₂ Na(C ₂ H ₅) ₂	2391-78-0	1160					CAB 13-1	28100 GM	200 GM
122											
152	DIETHYLENETRIAMINE PENTAACETIC ACID	(C ₂ H ₂ NH ₂ O) ₂ H ₂ SO ₄ -7	67-17-8						CAB 3-1	21500 GM	1000 GM
676	DIHEXYL DIETHYLCARBAMYL NETHYLENE PHOSPHONATE	[CH ₃ (CH ₂) ₅ O] ₂ POCH ₂ CO	7369-16-6						CAB 20-4	181 KG	1 KG
436	DIHEXYL-N,N-DIETHYLCARBAMYL NETHYLENE PHOSPHONATE	[CH ₃ (CH ₂) ₅ O] ₂ POCH ₂ CO	7369-16-6						CAB 19-2	18500 ML	500 ML
153	DIKETAMYLGLYOXIME	CH ₃ C(=O)C ₂ H ₅ CO ₂ C ₂ H ₅	1515-15-1	2272					CAB 36 ARCHIVE	28500 GM	1000 GM
915	DIKETIMYLGLYOXIME	(CH ₃) ₂ C ₂ (C ₂ H ₅) ₂	9515-15-1	2272					CAB 22-5	181 LITER	1 LITER
1195	DIKETIMYLGLYOXIME	(CH ₃) ₂ C ₂ (C ₂ H ₅) ₂	9515-15-1	2272					CAB 13-1	18125 GM	125 GM
1196	DIKETIMYLGLYOXIME SODIUM SALT	(CH ₃) ₂ C ₂ (C ₂ H ₅) ₂ -OH ₂ O							CAB 13-1	18125 GM	125 GM
1194	DIKETIMOLALATE	CH ₃ COOC ₂ H ₅	555-19-2	3224	CORROSIVE				CAB 13-1	18100 GM	100 GM
691	DIONET STOCK								CAB 37	68250 ML	1500 ML
1053	DIPHENOL-SULFURIC 1%	(C ₆ H ₅) ₂ SO ₂	127-43-9						CAB 37 ARCHIVE	18100 ML	100 ML
1282	DIPHENYL CARBALIZINE	C ₆ H ₅ Si(Br,Cl,Br,Cl,Br,Cl,C ₆ H ₅) ₂	130-22-7						CAB 13-3	1825 GM	25 GM
6	HS										
1159	DIPHENYL-1,10-PHENANTHRIDINE 4,7-	(C ₆ H ₅) ₂ C ₁₂ H ₈ N ₂	1882-01-7	1937					CAB 13-1	281 GM	2 GM
1268	DIPHENYL-4,7-1,10-PHENANTHRIDINE	(C ₆ H ₅) ₂ C ₁₂ H ₈ N ₂	1882-01-7						CAB 13-3	781 GM	7 GM
151	DIPHENYLAMINE	(C ₆ H ₅) ₂ NH ₂	122-37-1	1176	POISON				CAB 36 ARCHIVE	18500 GM	500 GM
1197	DIPHENYLAMINE	(C ₆ H ₅) ₂ NH ₂	122-37-1	1176	POISON	Y			CAB 13-1	28100 GM	200 GM
1157	DIPHENYLCARBONITRILE	C ₆ H ₅ SH(C ₆ H ₅)C≡NHC≡N	140-22-7	1724					CAB 31-1	18100 GM	100 GM
1201	DIPHENYLPROPANOIC 1,3	C ₆ H ₅ CH ₂ COCH ₂ C ₆ H ₅	102-01-5		FLAMMABLE				CAB 13-1	1810 GM	10 GM
1202	DIPHENYLTHIO CARBOZONE	C ₆ H ₅ CONHN(C ₆ H ₅) ₂ CH ₂ CO ₂ H	60-10-6	2023	POISON	Y			CAB 13-1	1810 GM	10 GM
157	DISODIUM DIBIMON HYDROGEN ETHELENEREDIAMINE TETRAACETATE BISHYDRATE	(KA ₂ OCH ₂ CH ₂ CH ₂ NHCH ₂ CH ₂ NHCH ₂ CH ₂ OCH ₂ CH ₂) ₂	6381-92-6	1180					CAB 3-2	38500 GM	1500 GM
1307	DISODIUM DIBIMON HYDROGEN ETHELENEREDIAMINE TETRAACETATE BISHYDRATE	(KA ₂ OCH ₂ CH ₂ CH ₂ NHCH ₂ CH ₂ NHCH ₂ CH ₂ OCH ₂ CH ₂) ₂	6381-92-6	1180					CAB 26-2	181 LB	1 LB
1294	DISODIUM HYDROGEN PHOSPHATE	Na ₂ HPO ₄	7559-79-4	1686	CORROSIVE				CAB 13-4	6150 GM	400 GM
1299	DISODIUM HYDROGEN PHOSPHATE	Na ₂ HPO ₄	7559-79-4	1886	CORROSIVE				CAB 13-4	68100 GM / 182 GM	402 GM
1210	DITHIZONE	C ₆ H ₅ SH(C ₆ H ₅) ₂ N-N-C ₆ H ₅	60-10-6	2023	POISON	Y			CAB 13-2	5810 GM	50 GM
5											
371	EAI FILM-SC								CAB 37 ARCHIVE	1850 ML	50 ML
1445	EDERITE	CAS804	778-16-7	1091					CAB 33-6	285 LB	10 LB
610	EFPA								CAB 15-1	281 LITER	2 LITER
1574	EDPA NA-5	61			FLAMMABLE				CAB 20-3	281 LITER	2 LITER
658	EPGOSTUM	O ₂ (HO) ₃ -CH ₂ O	10031-19-9		CORROSIVE			21 KH03	CAB 22-3	28500 ML	1000 ML
1528	EPGOSTUM NITRATE	O ₂ (HO) ₃ -CH ₂ O	10031-19-9						74	1825 GM / 28100 GM	225 GM
1444	EPGOSTUM OXIDE	O ₂ (O) ₃	130-07-8						74	2825 GM	50 GM
156	EDTA	(HOOCCH ₂ CH ₂ NHCH ₂ CH ₂ CO ₂) ₂	60-00-1	1206					CAB 36 ARCHIVE	18500 GM	2000 GM
596	ESTA	Na ₂ CO ₃ CH ₂ CH ₂	6381-92-6	1180					X CTR	18500 ML	500 ML

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 10 of 35)

SEC.	COMMON NAME	FORMULA	CAS NUMBER	MSS & CLASSIFICATION	C P MATRIX	LOCATION	UNITS/SIZE	TOTAL	
1000	EDTA	NA2O2Cl2O814H2	6381-92-6	1180		DESC 4	1850 GM	50 GM	
1531	EDTA ACID FORM	(CH2COOH)4N2CH2	60-08-1	1206		CAB 12-2	1825 GM	25 GM	
375	EDTA DISODIUM SALT	Na2O2Cl2O814H2-2H2O	6381-92-6	1180		GROUT CART RM A	18500 GM	500 GM	
379	EDTA DISODIUM SALT DIHYDRATE CRYSTAL	NaCO2H2(NAOCOCH2)2NaCH2O2H2	139-33-3	2786		CAB 8-1	28500 GM	1000 GM	
		2CH2N(CH2COOH)2NaCl2O							
		Ox-2H2O							
138	EDTA MAGNESIUM DISODIUM SALT	ClO2N12H2Na2H2O8	14402-09-1			CAB 3-2	18500 GM	500 GM	
941	EDTA SOLUTION	1-CH2N(C2C2O2Na)CH2C	6381-92-6	1180		CAB 22-6	481600 ML	4000 ML	
		O2H12							
1304	EDTA SOLUTION	1-CH2N(CNECO2Na)CH2C	6381-92-6	1180		CAB 37 ARCHIVE	181000 ML	1000 ML	
		O2H12							
1305	EDTA SOLUTION	1-CH2N(CH2C2O2Na)CH2C	6381-92-6	1180	CORROSIVE	CAB 37 ARCHIVE	28500 ML	1000 ML	
		O2H12							
158	EDTA TETRASODIUM DIHYDRATE	Na4O2Cl2H2O2Na2O6-2H2O	10378-23-1	2817		CAB 3-2	38500 GM	1500 GM	
		Na2CO3Na12-2H2O							
140	EDTA TRISODIUM SALT	ClO2N13H2Na3O6-3H2O	85718-49-2	1206		CAB 3-2	18500 GM	500 GM	
1361	ELECTRODE FILLING SOL'N ORION					CAB 24-3	1825 GM	50 GM	
1422	EPA MATERIAL WS378 CONC.3				H03/F+	CAB 21-4	1820 ML	20 ML	
1427	EPA MATERIAL TURBIDITY WS278 CONC. 1					CAB 21-4	2045 ML	100 ML	
1437	EPA MATERIAL WS381 CONC. 1					CAB 21-5	1820 ML / 5820 ML	120 ML	
1438	EPA MATERIAL WS384 CONC2 PH					CAB 21-5	5820 ML / 1820 ML	120 ML	
1425	EPA MATERIAL XP106 CONC 1 DE NUTRIENT					CAB 21-4	1820 ML	20 ML	
1426	EPA MATERIAL Y/106 CONC. 2 QC NUTRIENT					CAB 21-4	1820 ML	20 ML	
1420	EPA MATERIAL WS 378 CONC.10				H03/F+	CAB 21-4	7820 ML	140 ML	
1421	EPA MATERIAL WS378 CONC. 1				H03/F+	CAB 21-4	10820 ML	200 ML	
1424	EPA MATERIAL WS378 CONC. 2.				H03/F+	CAB 21-4	1820 ML	20 ML	
1423	EPA MATERIAL WS378 CONC.5				H03/F+	CAB 21-4	1820 ML	20 ML	
1419	EPA QC ICP 7219					CAB 21-5	2820 ML	40 ML	
139	ERIDIUM	ER		CORROSIVE	21 HNO3	CAB 22-3	28500 ML	1000 ML	
1539	ERIDIUM NITRATE	ER(NO3)3-5H2O	10031-51-3	2026			74	1825 GM	25 GM
1521	ERIDIUM OXIDE	ER2O3	12031-16-4	2026			74	2825 GM	50 GM
1223	ERIOCHROME BLACK T	1-HOC1O8-2N=H-4C1O8	1787-61-7	2225		CAB 13-2	18100 GM / 1810 GM	110 GM	
		4-3-OH-7-HO2-1-SO3Na							
1092	ERIOCHROME BLACK-T .4%	1-SO2C1O8-2N=H-4C1O8	1787-61-7	2225		CAB 37 ARCHIVE	18100 ML	100 ML	
		4-3-OH-7-HO2-1-SO3Na							
1221	ERIOCHROME CYANINE R	C23H13N43O15	3618-13-1			CAB 13-2	1825 GM	25 GM	
1220	ERITHROSIN BLUEISH	C20H16N4Na2O5	548-43-0	1907		CAB 13-2	1825 GM	25 GM	
1219	ERITHROSIN YELLOWISH	C20H18N4Na2O5				CAB 13-2	18100 GM	100 GM	
1264	ETHACENGYLIDENEONITRILIO 2,2-BIPHENOL	HOCH2NHC(=O)CH=CH2NaOH	1149-18-2			CAB 13-2	1810 GM	10 GM	
56	ETHYL ALCOHOL	C2H5OH	64-17-5	1166	FLAMMABLE	CAB 24-1	281 PT	3 PT	
1077	ETHYL RED .170	(CH3)2HC=HN=HN(CO2)2	815-10-3	1317		CAB 37 ARCHIVE	18100 ML	100 ML	
		Na							
685	ETHYL-2-I-HEXANOL	CH3(CH2)3CH(CH2H5)CH	104-74-7	1194	POISON	CAB 20-3	281 KILO	1 KILO	
		20K							
870	EUROPIUM	EU			CORROSIVE	21 HNO3	CAB 22-3	18500 ML	500 ML
1245	EUROPIUM	EU			CORROSIVE	21 HNO3	CAB 23-4	18500 ML	500 ML
1532	EUROPIUM CHLORIDE	EUCL3	13759-92-7				74	1810 GM	10 GM
1467	EUROPIUM OXIDE	EU2O3	1308-16-9				74	1810 GM	10 GM
1261	FAST SULPHUR BLACK-F	FEIXXH(SO4)2-12H2O	10138-04-2	1210		CAB 13-2	1810 GM	10 GM	
		42 FERRIC AMMONIUM SULFATE				87	1.8 100 ML	100 ML	

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 11 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	HSDS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
219	FERRIC ANHYDRUM SULFATE	FeNH4(SO4)2-12H2O	10136-01-2	1210				CAB 3-2	51500 GM	2200 GM
401	FERRIC ANHYDRUM SULFATE	FeNH4(SO4)2-12H2O	10131-01-2	1210				CAB 3-4	16500 GM	500 GM
1138	FERRIC ANHYDRUM SULFATE	FeNH4(SO4)2	10138-01-2	1210				CAB 31-2	11500 GM	500 GM
220	FERRIC CHLORIDE	FeCl3-H2O	10025-77-1	1211 CORROSIVE				CAB 3-3	28500 GM	1000 GM
401	FERRIC CHLORIDE	FeCl3-H2O	10025-77-1	1211 CORROSIVE				CAB 3-4	16500 GM	500 GM
1135	FERRIC CHLORIDE	FeCl3	7705-01-6	1211 CORROSIVE				CAB 31-2	34500 GM	1500 GM
1533	FERRIC CYCLOHEXANE BUTYRATE							74	185 GM	5 GM
161	FERRIC NITRATE	Fe(NO3)3-H2O	10421-10-4	1214 OXIDIZER				CAB 3-2	142500 GM	7000 GM
405	FERRIC NITRATE	Fe(NO3)3-5H2O	10421-10-4	1214 OXIDIZER				CAB 3-4	21500 GM	1600 GM
1136	FERRIC NITRATE	Fe(NO3)3-9H2O	10421-10-4	1214 OXIDIZER				CAB 31-2	48500 GM	3000 GM
1132	FERRIC OXIDE	Fe2O3	1301-37-1	1666 OXIDIZER				CAB 3-3	18500 GM	500 GM
1134	FERRIC OXIDE	FE2O3	1301-37-1	1666 OXIDIZER	Y			DESC 4	1850 GM	50 GM
1651	FERRIC OXIDE	FE2O3	1301-37-1	1666 OXIDIZER	Y			CAB 36 ARCHIVE	10300 GM	500 GM
1130	FERRICO INDICATOR	(CH2BrCl2)2FeS04	7743-45-9	1217				CAB 27-4	484 OL.	10 OL.
1135	FERROUS ANHYDRUM SULFATE	Fe(II)(Cl2)2(SO4)2-6H2O	7781-05-9	1217				CAB 3-3	114500 GM	5500 GM
408	FERROUS ANHYDRUM SULFATE	Fe(II)(Cl2)2(SO4)2-6H2O	7781-05-9	1217				CAB 3-4	28500 GM	1000 GM
1224	FERROUS ETHYLENEDIAMINE SULFATE	FeC2H4(NH3)2(SO4)2-4H2O						CAB 13-2	18200 GM	200 GM
1225	FERROUS ETHYLENEDIAMMONIUM SULFATE	FeC2H4(NH3)2(SO4)2-4H2O						CAB 13-2	18113 GM	113 GM
26	FERROUS SULFATE			1228				FRIG	12825 ML	365 ML
1038	FERROUS SULFATE			1228				FRIG	281000 ML	2600 ML
1141	FERROUS SULFATE	Fe(SO4)2-7H2O	1191-43-9	1214				CAB 3-3	124500 GM / 485 KG	10 KG
1027	FERROUS SULFATE	FeSO4-7H2O	7792-03-9	1215				CAB 6-4	16500 GM	500 GM
1143	FERROUS SULFATE	FeSO4-7H2O	7792-03-9	1215				CAB 31-2	14500 GM / 181000 GM	1500 GM
1564	FLUORIDE (SODIUM)	Naf	7681-49-4	1491 POISON				CAB 12-6	28100 ML	200 ML
529	FLUORIDE STARCHAD (SODIUM)	Naf	7681-49-4	1491 POISON				CAB 37 ARCHIVE	38500 ML	1500 ML
975	FURIC ACID	HCO2HA	111-53-7	1226 CORROSIVE				DESC 3	185 GM	5 GM
1165	FUROIC ACID	CSH4O3	60-14-2					CAB 36 ARCHIVE	14500 GM	500 GM
607	GADOLINIUM	60		CORROSIVE				CAB 37 ARCHIVE	28500 ML	1000 ML
863	GADOLINIUM	60	7647-01-0	CORROSIVE				CAB 23-3	2850 ML	100 ML
877	GADOLINIUM	60	7647-01-0	CORROSIVE				CAB 22-3	18300 ML	500 ML
1534	GADOLINIUM CHLORIDE	GCCL3-H2O	13150-84-0					74	1625 GM	25 GM
1535	GADOLINIUM NITRATE	GD(NO3)3-5H2O	92769-33-1	3295				74	18100 GM	100 GM
1535.	GADOLINIUM OXIDE	GD2O3	12661-12-9	1229				74	18100 GM / 1825 GM	125 GM
1537	GERMANIUM POWDER	GE	7410-54-1	3351 FLAMMABLE				74	1810 GM	10 GM
437	GLYCERAL H2O	HOC(H2CO)CH2O	56-11-5	1231 FLAMMABLE				CAB 19-2	281 LITER	2 LITER
36	GLYCOLIC ACID	HOC2CO2H	71-14-1	2264				FRIG	1850 ML	50 ML
1145	GLYCOLIC ACID	HOC2CO2H	71-14-1	2264				CAB 3-3	18500 GM	500 GM
371	GLYCOLIC ACID	HOC2CO2H	71-14-1	2264				GROUT CART RM A	181000 GM	1000 GM
1403	GLYCOLIC ACID	HOC2CO2H	71-14-1	2264				CAB 34-2	281000 ML	2000 ML
1076	GRANERGY UNIVERSAL INDICATOR							CAB 27-4	18500 ML	500 ML
1112	GRAPHITE POWDER	C	7702-12-5	2236				CAB 27-4	181 OL.	1 OL.
1114	GREASE							CAB 32-4	484 OL.	16 OL.
1538	ISOPHILUM POWDER	Nf	7410-58-6	FLAMMABLE				74	181 GM	1 GM
501	HALOGEN 25-55 GREASE							DRAYER 16	181 OL.	1 OL.
1561	HEAVY METAL							GROUT CART	18250 ML	250 ML
370	HEDTA TRISODIUM SALT DIHYDRATE	HOC(H2CH2N(CH2CO2Na)C	139-89-9	3342					181000 GM	1000 GM
				H2CH2N(CH2CO2Na)2-2H						

Q - I - S - T - 1 - 7

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 12 of 35)

370 HEPTA TRISODIUM SALT DIHYDRATE		HOC(=O)CH2N(CH2CO2Na)2 139-89-1	3342	CAB B-1	181000 GM	1000 GM
392 HEPTA TRISODIUM SALT DIHYDRATE		CH2CH2N(CH2CO2Na)2-2H Na2O		DESC 4	1810 GM	10 GM
993 HEPTA TRISODIUM SALT DIHYDRATE		HOC(=O)CH2N(CH2CO2Na)2C 139-89-1	3342			
	20	H2CH2N(CH2CO2Na)2-2H				
1306 HEPTA TRISODIUM SALT DIHYDRATE		HOC(=O)CH2N(CH2CO2Na)2C 139-89-1	3342	CAB 2a-2	18100 GM	100 GM
	20	H2CH2N(CH2CO2Na)2-2H				
1558 HEPTA TRISODIUM SALT DIHYDRATE		HOC(=O)CH2N(CH2CO2Na)2C 139-89-1	3342	CAB 3-4	18100 GM	100 GM
	20	H2CH2N(CH2CO2Na)2-2H				
1850 HEPTA TRISODIUM SALT DIHYDRATE		HOC(=O)CH2N(CH2CO2Na)2C 139-89-1	3342	CAB 13-2	2825 GM	50 GM
	20	H2CH2N(CH2CO2Na)2-2H				
679 HEPTANE		CH3(CH2)5CH3 142-82-5	2142	FLAMMABLE LIQUID	CAB 20-4	102 PT.
680 HEPTANE		CH3(CH2)5CH3 142-82-5	2142	FLAMMABLE LIQUID	CAB 20-4	51500 ML
167 HEXAHYDROXYBENZENE TETRAHYDRINE		CaH12N 100-97-9	1248	FLAMMABLE SOLID Y	CAB 36 ARCHIVE	28500 GM
168 HYDROXY COBALIC CHLORIDE		[Co(OH)3]6Cl3 10534-61-1			CAB 36 ARCHIVE	28500 GM
1171 HYDROXY-β-ACETATE				ELIMINABLE	CAB 21-2	1000 GM
876 HOLLOW		HO		CORROSIVE	CAB 22-3	28500 ML
1520 HOLLOW CHLORIDE		HOCl3·4H2O 14911-81-2			74	10 GM
1537 HOLLOW OXIDE		HO(HOCl3)3·5H2O 14913-18-2			74	10 GM / 105 GM
1401 HCl 211-214					CAB 34-2	15000 ML
27 HYDRAZINE		H2NHNH2-H2O	7803-57-8	1451 CORROSIVE POISON Y Y	FRIG	28500
169 HYDRAZINE SULFATE		(HO2)2NH2SO4	10034-93-2	2298 POISON Y Y	CAB 3-3	48125 GM / 38500 GM
418 HYDRAZINE SULFATE		(HO2)2NH2SO4	10034-93-2	2298 POISON Y Y	CAB 8-5	38500 GM
1023 HYDRAZINE SULFATE		(HO2)2NH2SO4	10034-93-2	2298 POISON Y Y	DESC 7	1030 GM
1452 HYDRAZINE SULFATE		(HO2)2NH2SO4	10034-93-2	2298 POISON Y Y	CAB 36 ARCHIVE	28100 GM
1382 HYDRO SIL'N ARSENIC		AS		POISON Y	CAB 27-2	10100 GM
1373 HYDRO SIL'N MERCURY		Hg			CAB 27-2	10100 GM
1360 HYDRO SIL'N SELENIUM		Se			CAB 27-2	10100 GM
302 HYDROBROMIC ACID		AIR	10035-10-6	2031 POISON/CORROSIV	CAB 4-4	101500 ML
14 HYDROCHLORINE					HO 4	101 LITER
4 HYDROCHLORIC ACID		HCl	7647-01-0	1250 CORROSIVE Y	143	31500 ML
22 HYDROCHLORIC ACID		HCl	7647-01-0	1250 CORROSIVE Y	HO 4	10250 ML / 105000 ML
520 HYDROCHLORIC ACID		HCl	7647-01-0	1250 CORROSIVE Y	X CAB SIDE 2 UNDER SINK	28500 ML
579 HYDROCHLORIC ACID		HCl	7647-01-0	1250 CORROSIVE Y	CAB 2 UNDER SINK	10300 ML
614 HYDROCHLORIC ACID		HCl	7647-01-0	1250 CORROSIVE Y	CAB 41-2	48500 ML
771 HYDROCHLORIC ACID		HCl	7647-01-0	1250 CORROSIVE Y	CAB 37 ARCHIVE	31200 ML / 68100 ML
1387 HYDROCHLORIC ACID		HCl	7647-01-0	1250 CORROSIVE Y	ORGANIC BENCH TOP	102500 ML
744 HYDROCHLORIC AMPULES		HCl	7647-01-0	1250 CORROSIVE Y	CAB 37 ARCHIVE	7500 ML
142 HYDROCHLORIDE		HCl	7647-01-0	1250 CORROSIVE	CAB 22-4	31500 GM
21 HYDROFLUORIC ACID		NF	7664-31-3	1251 CORROSIVE POISON	HO 4	10500 ML
39 HYDROGEN PEROXIDE		H2O2	7722-01-1	1257 CORROSIVE OXIDI	FRIG	10500 ML
508 HYDROGEN SULFITE		H2SO4			CAB 17-3	1000 GM
422 HYDROQUINONE		CaH10O4 12	123-31-1	1262 POISON	CAB 3-4	31500 GM

9 1 1 2 6 1 7 3

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 13 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	MSDS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
1412	HYDROXIDE HYDROCHLORIC							CAB 34-6	18250 mL	250 mL
1443	HYDROXYLAMINE SULFATE	(H2NOH)2-H2SO4	16039-51-0	1688 POISON CORROSIV				CAB 36 ARCHIVE	181000 GM	1000 GM
1228	HYDROXY NAPHTHOL BLUE							CAB 13-2	18100 GM	100 GM
1563	HYDROXYETHYLETHYLENEDIAMINE-N-TRIACETIC ACID	HOCH2CH2N-(CH2CO2H)2	150-39-0	3318				GRAUT CART RM A	18100 GM	100 GM
173	HYDROXYLAMINE HYDROCHLORIDE	H2N OH-HCl	5470-11-1	1263 CORROSIVE POISON				CAB 3-4	181000 GM	7000 GM
417	HYDROXYLAMINE HYDROCHLORIDE	NH2OH-HCl	5470-11-1	1263 POISON CORROSIV				CAB 8-5	28500 GM	1000 GM
171	HYDROXYLAMINE NITRATE	NH2OHNO3	13143-08-2	1264				CAB 23-4	181000 mL / 28500 mL	2000 mL
172	HYDROXYLAMINE SULFATE	(NH2OH)2-H2SO4	16039-51-0	1688 POISON CORROSIV				CAB 3-4	18125 GM	125 GM
170	HYDROXYQUINOLINE-4	HOCH2NH	146-24-3	1033				CAB 3-4	18100 GM	1000 GM
1229	INDIUM CARBINE	C14H8N2Na2052	860-22-0	1682				CAB 13-2	1825 GM	25 GM
1511	INDIUM NITRATE	IN(NO3)3-H2O	13143-11-0	13145 OXIDIZER				CAB 36 ARCHIVE	1815 GM	25 GM
777	IODINE 2	I2	7553-56-2	1266 POISON CORROSIV				CAB 37 ARCHIVE	18200 mL	1200 mL
175	IODINE CRYSTALS	I2	7553-51-2	1266 POISON CORROSIV				CAB 3-4	18100 GM	100 GM
174	IODINE RESUBLIMED	I2	7553-56-2	1266 POISON CORROSIV				CAB 3-4	28500 GM / 18100 GM	1100 GM
668	ICHALIZER 2 M	IN(H3)4SO4						44	1850 mL	50 mL
1466	IRIDIUM POWDER	IR	7437-09-5	17224 FLAMMABLE				74	182 GM	2 GM
1512	IRIDIUM TRIBROMIDE	IRBr3-4H2O						74	1810 GM	10 GM
720	IRON	FE	7437-09-6	1269 FLAMMABLE SOLID CORROSIVE	ZI	HCL		CAB 7-2	18250 GM	1000 GM
774	IRON	FE	7437-01-6	1269				CAB 37 ARCHIVE	181000 GM	500 GM
780	IRON	FE	7437-01-6	1269				CAB 37 ARCHIVE	18100 GM	100 GM
718	IRON	FE	7437-01-6	1269				CAB 23-4	28500 GM	1000 GM
807	IRON	FE	7437-01-6	-	CORROSIVE			CAB 23-3	18250 mL	100 GM
871	IRON	FE	7437-01-6	-	CORROSIVE			CAB 22-2	181000 GM	500 GM
873	IRON	FE	7437-01-6	-	CORROSIVE			CAB 22-3	181000 GM	500 GM
1461	IRON	FE	7437-01-6	-	CORROSIVE			CAB 23-3	18250 GM	50 GM
724	IRON ELECTROLYTE	FE	7437-09-6	1269 POISON CORROSIV	Y			CAB 7-2	1810 GM / 1850 GM	50 GM
1267	IRON ELECTROLYTE	FE	7437-01-6	1269 POISON CORROSIV	Y			CAB 13-1	18100 GM	100 GM
726	IRON HAZZ	FE	7437-01-6	1269 FLAMMABLE SOLID				CAB 7-2	18100 GM / 182 GM	102 GM
1285	IRON OPEN HEARTH							CAB 13-4	18100 GM	100 GM
721	IRON WIRE	FE	7437-01-6	1269 FLAMMABLE SOLID				CAB 7-2	1812 FT	12 FT.
723	IRON WIRE	FE	7437-09-6	1269 FLAMMABLE SOLID				CAB 7-2	18500 GM / 1810 GM	40 GM
625	ISO-AMYL-ALCOHOL	(CH3)2CHCH2CH2CH3	123-51-3	2037 FLAMMABLE CORROSIVE				CAB 19-1	182500 GM	4500 GM
639	ISO-OCTANE	(CH3)2CHCH2(CH3)3	510-84-1	1272 FLAMMABLE				CAB 19-3	181000 GM	5000 GM
646	ISO-PROPYL ALCOHOL	CH3CH(OCH3)2	67-63-0	1279 FLAMMABLE	Y			CAB 19-4	188 PT	8 PINT
648	ISO-PROPYL ALCOHOL	CH3CH(OCH3)2	67-63-0	1279 FLAMMABLE	Y			CAB 19-4	181 LITER	24 LITTERS
627	ISOPENTYL ALCOHOL	(CH3)2CHCH2CH2CH3	123-51-3	2037 FLAMMABLE				CAB 19-1	182500 GM	500 GM
630	LAB SOLV. 25KTEP/NPH							CAB 19-1	38100 GM	300 GM
572	LABORATORY SPILL KIT ACTIVS							N AND S DOOR OF LAB	382 LB	6 LB
573	LABORATORY SPILL KIT CAUSTIC							N & S END OF DOOR LAB	282LB	4 LB
575	LABORATORY SPILL KIT FLAMMABLE SOLVENTS							N DOOR OF LAB	182 LB	2 LB
571	LABORATORY SPILL KIT HYDROFLUORIC ACID							N DOOR LAB	182 LB	2 LB
570	LABORATORY SPILL KIT MERCURY							N DOOR OF LAB	182 LB	2 LB
574	LABORATORY SPILL KIT SOLVENTS							N END OF DOOR OF LAB	182 LB	2 LB
830	LANTHANUM	LA	7617-01-0	1901 CORROSIVE			10I HCL	CAB 23-3	1850 GM	50 GM
843	LANTHANUM	LA	7437-91-0	1901 CORROSIVE			2I NH3	CAB 23-4	28500 GM	1000 GM
900	LANTHANUM	LA	7429-91-0	1901 CORROSIVE			2I NH3	CAB 22-3	181000 GM	500 GM
1040	LANTHANUM	LA	7437-91-0	1901 CORROSIVE			2I NH3	CAB 37 ARCHIVE	181000 GM	500 GM
1543	LANTHANUM CHLORAHILATE							74	1825 GM	25 GM
176	LANTHANUM CHLORIDE	LaCl3+H2O	20211-76-1	1284				CAB 3-4	28100 GM	200 GM

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 14 of 35)

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 15 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	HSDS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
901	LUTETIUM	Lu					21 HNO3	CAB 22-3	21500 ML	1000 ML
1512	LUTETIUM CHLORIDE	LuCl3	10079-61-8	CORROSIVE				74	182 GM	2 GM
1517	LUTETIUM OXIDE	Lu2O3	12032-20-1					74	181 GM	1 GM
813	MAGNESIUM	Mg	7647-01-9	CORROSIVE	10% HCl		CAB 23-3	3150 ML	150 ML	
815	MAGNESIUM	Mg		CORROSIVE	21 HNO3		CAB 23-4	21500 ML	1000 ML	
902	MAGNESTIUM	Mg		CORROSIVE	21 HNO3		CAB 22-3	21500 ML	1000 ML	
1514	MAGNESIUM	Mg	7439-95-4	FLAMMABLE			CAB 7-2	185 GM	5 GM	
191	MAGNESIUM CARBONATE	MgCO3	516-15-0	1312			CAB 36 ARCHIVE	18100 GM	100 GM	
192	MAGNESIUM CERIUM NITRATE						CAB 36 ARCHIVE	18100 GM	10 GM	
713	MAGNESIUM CHIPS	Mg	7439-95-4	FLAMMABLE			CAB 7-2	21250 GM	500 GM	
193	MAGNESIUM CHLORIDE	MgCl2·6H2O	7791-18-6	1309			CAB 3-5	61500 GM	3000 GM	
416	MAGNESIUM CHLORIDE	MgCl2·6H2O	7791-18-6	1309			CAB 8-5	18500 GM	500 GM	
1025	MAGNESTIUM CHLORIDE	MgCl2·6H2O	7791-18-6	1309			DESC 8	1825 GM	25 GM	
1457	MAGNESIUM CHLORIDE	MgCl2	7706-30-3	1309			CAB 36 ARCHIVE	21500 GM	1000 GM	
1451	MAGNESIUM CYCLOHEXANE BUTYRATE	Mg(OOCCH2CH2OH)2					74	215 GM	10 GM	
194	MAGNESIUM HYDROXIDE	Mg(OH)2	1308-12-6	1311	CORROSIVE		CAB 3-6	18500 GM	500 GM	
739	MAGNESIUM METAL POWDER	Mg	7439-95-4	1312	FLAMMABLE		CAB 7-1	18100 GM	100 GM	
737	MAGNESIUM METAL TURNINGS	Mg	7439-95-4	1312	FLAMMABLE		CAB 7-3	18453.6 GM	453.6 GM	
195	MAGNESIUM NITRATE	Mg(NO3)2·6H2O	10377-10-3	3339	OXIDIZER		CAB 3-6	58500 GM	2500 GM	
913	MAGNESENIUM NITRATE	MgNO3	10377-60-3	3339	OXIDIZER		CAB 36 ARCHIVE	18500 GM	500 GM	
1031	MAGNESIUM NITRATE	Mg(NO3)2·6H2O	10377-60-3	3339	OXIDIZER		DESC 9	1850 GM	50 GM	
141	MAGNESIUM OXIDE	MgO	1309-18-6	1313			CAB 2-8	18500 GM	500 GM	
401	MAGNESIUM OXIDE	MgO	1309-18-6	1313			CAB 12-2	1825 GM	25 GM	
937	MAGNESIUM OXIDE	MgO	1309-18-6	1313			CAB 36 ARCHIVE	18500 GM / 18125 GM	510 GM	
709	MAGNESIUM PIECES	Mg	7439-95-4	1312	FLAMMABLE		CAB 7-2	21500 GM	1000 GM	
196	MAGNESIUM SULFATE	MgSO4	7407-98-9	1316	OXIDIZER		CAB 3-6	18500 GM	500 GM	
712	MAGNESTIUM TURNINGS	Mg	7439-95-4	1312	FLAMMABLE		CAB 7-2	185 GM / 1825 GM / 18500 GM	520 GM	
935	MALIC ACID	HOOCCH2CH(OH)CO2H	631-61-3	2474			CAB 36 ARCHIVE	18125 GM	125 GM	
197	MALONIC ACID	HOOCCH2CO2H	141-02-2	1316			CAB 3-6	21500 GM	1000 GM	
344	MALONIC ACID	HOOCCH2CO2H	141-02-2	1316			CAB 36 ARCHIVE	21500 GM	1000 GM	
776	MANGANESE	Mn			CORROSIVE		CAB 37 ARCHIVE	28100 ML	200 ML	
821	MANGANESE	Mn	7497-37-2	1307	CORROSIVE		CAB 23-3	3150 ML	150 ML	
835	MANGANESE	Mn					CAB 23-4	18500 ML	500 ML	
1660	MANGANESE	Mn					CAB 27-1	18500 ML	500 ML	
178	MANGANESE BISOXIDE	MnO2	1313-13-9	2336	OXIDIZER		CAB 3-6	18500 GM	500 GM	
414	MANGANESE DIOXIDE	MnO2	1313-13-9	2336	OXIDIZER		CAB 8-5	18500 GM	500 GM	
413	MANGANESE NITRATE	Mn(NO3)2·4H2O	2069-37-7	1970	OXIDANT		CAB 8-5	18500 GM	500 GM	
199	MANGANESE OXIDE	MnO2	1313-13-9	2336	OXIDIZER		CAB 3-6	18200 GM	200 GM	
675	MANGANESE OXIDE	MnO2	1313-13-9	2336	OXIDIZER		CAB 36 ARCHIVE	181 GM	1 GM	
985	MANGANESE OXIDE	MnO2	1313-13-9	2336	OXIDIZER		DESC 3	185 GM	5 GM	
1004	MANGANESE OXIDE	MnO2	1313-13-9	2336	OXIDIZER		DESC 5	18500 GM	50 GM	
201	MANGANESE SULFATE	MnSO4·H2O	10031-16-3	1316			CAB 36 ARCHIVE	18500 GM	500 GM	
999	MANGANESE SULFATE	MnSO4·H2O	10031-16-3	1316			DESC 4	1825 GM	25 GM	
200	MANGANOUS CHLORIDE	MnCl2·H2O	13446-34-9	1316			CAB 36 ARCHIVE	21500 GM	1000 GM	
917	MANGANOUS NITRATE	Mn(NO3)2	15710-44-4	1970	OXIDIZER		CAB 22-5	18500 ML	500 ML	
317	MANGANOUS SULFATE	MnSO4	7705-87-2	1905			CAB 36 ARCHIVE	18500 GM	1500 GM	
202	MEURICIC CHLORIDE	MgCl2	7487-91-7	2217	POISON		CAB 3-6	18125 / 18500 GM	425 GM	
1452	MEURICIC CHLORIDE	MgCl2	7407-91-7	2217	POISON		CAB 36 ARCHIVE	18113.1 GM / 18125 GM	238.4 GM	
203	MEURICIC IODIDE	MgI2	7774-21-0	1681	POISON		CAB 36 ARCHIVE	22250 GM / 18500 GM	1000 GM	
204	MEURICIC IODIDE	MgI2	7774-21-0	1681	POISON		CAB 3-6	18500 GM	5000 GM	

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 16 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	XSDS I CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
225	MERCURIC NITRATE	Hg(HO3)2	10045-91-0	1321	POISON OXIDIZER			CAB 36 ARCHIVE	14100 GM	100 GM
226	MERCURIC SULFATE	HgSO4	7783-35-9	2810	POISON CORROSIV	Y		CAB 36 ARCHIVE	18500 GM	500 GM
228	MERCURIC THIOCYANATE	Hg(CN5)2	592-05-8	1322	POISON	Y		CAB 36 ARCHIVE	1850 GM / 18500 GM	250 GM
227	MERCURIC THIOCYANATE	Hg(CN5)2	592-05-8	1322	POISON	Y		CAB 4-1	21500 GM	1000 GM
228	MERCURIC NITRATE	Hg(NO3)2	7782-01-7	2174	POISON	Y		CAB 36 ARCHIVE	14125 GM	125 GM
208	MERCURIC SULFATE	HgSO4	7783-36-0		POISON	Y		CAB 3-6	18100 GM	200 GM
722	MERCURY	Hg	7437-97-6	1323	POISON	Y		CAB 7-2	21250 GM	500 GM
817	MERCURY	Hg	7437-97-6		CORROSIVE		101 KHOS	CAB 22-3	18500 ML	500 GM
1388	MERCURY	Hg	7437-97-6	1323	CORROSIVE		101 KHOS	CAB 27-2	18500 ML / 18500 ML	550 GM
717	MERCURY 2	Hg2			POISON			CAB 37 ARCHIVE	28200 ML	400 GM
301	META-DISULFITE	Na2S2O5						CAB 5-3	14500 GM	300 GM
635	METHANOL	CH3OH	67-56-1	1329	FLAMMABLE POISO	Y		CAB 19-2	258500 ML	12500 GM
610	METHANOL	CH3OH	67-56-1	1329	FLAMMABLE POISO	Y		CAB 19-3	258500 ML	12500 GM
1131	METHANOL	CH3OH	67-56-1	1329	FLAMMABLE POISO	Y		CAB 24-3	258500 ML	12500 GM
1237	METHYL 2-0 QUINOLINOL		626-91-3	2214				CAB 13-2	2825 GM	50 GM
772	METHYL 3-1 PHENYL-2-PYRAZOLIN-5	CH3N5=CN(CH3)2CH2O	69-25-0	2042				CAB 36 ARCHIVE	18500 GM	500 GM
1233	METHYL CALCEIN		54186-41-2					CAB 13-2	515 GM	25 GM
659	METHYL ISO-BUTYL KETONE	CH3COCH2CH(CH3)2	108-10-1	1343	FLAMMABLE			CAB 20-2	781 QT.	8 QUART
1093	METHYL ORANGE	(CH3)2NC6H5=CHCH2CH2	547-58-0	1344				CAB 37-6	18125 ML	125 GM
1234	METHYL ORANGE	(CH3)2NC6H5=CHCH2CH2	547-58-0	1344				CAB 13-2	1850 GM	100 GM
		COCH3								
1161	METHYL ORANGE .05%	(CH3)2NC6H5=CHCH2CH2C	547-58-0	1345				CAB 37-6	18100 ML	100 ML
		OC(=O)CH3								
1067	METHYL ORANGE II	(CH3)2HC6H5=CHCH2CH2	547-58-0	1346				CAB 37-6	181 LITER	1 LITER
1081	METHYL ORANGE 5%	(CH3)2HC6H5=CHCH2CH2	547-58-0	1346				CAB 37-6	18125 ML	125 GM
		COCH3								
1082	METHYL ORANGE IYDENE INDICATOR							CAB 27-1	24500 ML	1000 GM
1075	METHYL PURPLE INDICATOR							CAB 27-3	681 QT.	6 QT
1238	METHYL RED	(CH3)2UC6H5N+CH6H1CO2	815-10-3	1347				CAB 13-2	4850 GM / 18113 GM	413 GM
		NA								
1246	METHYL RED HYDROCHLORIDE CRYSTAL	(CH3)2NC6H5N+CH6H1CO	63451-28-5					CAB 13-3	1830 GM	30 GM
		DH-CL								
1239	METHYL VIOLET		6001-07-3	1348	POISON			CAB 13-2	2810 GM	20 GM
1236	METHYL 3 -1-PHENYL-2-PYRAZOLIX-5-ONE	CH3N5=C(CH3)CH2CO	69-25-0	2042				CAB 13-2	18100 GM	100 GM
1232	METHYLENE BLUE	C10H18ClN3-3H2O	61-73-1	2282				CAB 13-2	1825 GM	25 GM
1233	METHYLENE BLUE	C10H18ClN3-3H2O	61-73-1	2282				CAB 13-3	18100 GM	100 GM
643	METHYLENE CHLORIDE	CH2Cl2	75-09-2	1350	POISON			CAB 19-3	581 LITER	4 LITER
1235	METOL							CAB 13-2	48100 GM	400 GM
688	MINERAL OIL			8012-15-1	2629			CAB 20-3	181 GM	1 GAL
1602	MINERALS (WP-478 3%)							CAB 21-2	3820 ML	50 ML
1601	MINERALS (WP-478 4%)							CAB 21-2	3820 ML	50 ML
1603	MINERALS (WP-478 3%)							CAB 21-2	5820 ML	100 ML
1633	MINERALS WP384 CONC 1A							CAB 21-3	1820 ML	20 ML
1634	MINERALS WP384 CONC 1B							CAB 21-3	1820 ML	20 ML
1635	MINERALS WP384 CONC 1C							CAB 21-3	1820 ML	20 ML
1630	MINERALS WP478 CONC 3C							CAB 21-3	5120 ML	100 ML
1631	MINERALS WP478 CONC 4A							CAB 21-3	3820 ML	40 ML
1632	MINERALS WP478 CONC 4B							CAB 21-3	3820 ML	40 ML

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 17 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	MSDS & CLASSIFICATION	C	P MATRIX	LOCATION	UNITS/SIZE	TOTAL
41	MIX REA WASH SOL						FATIGUE	10L LITER	1 LITER
829	MOLYBDENUM	HO	7647-01-0	CORROSIVE	10X HCL	CAB 23-3	3150 ML	150 ML	
1506	MOLYBDENUM	HO			H2O	CAB 23-4	10500 ML	500 ML	
1053	MOLYBDENUM	HO			H2O	CAB 27-1	10500 ML	500 ML	
1453	MOLYBDENUM	HO	7439-18-7	2331		74	10100 GM	100 GM	
228	MOLYBDATE ACID	HO(O)PO4	7702-91-9	2342		CAB 36 ARCHIVE	31500 GM	1500 GM	
229	MONOCHLORACETIC ACID	CH2ClCOOH	79-11-0	1125	POISON CORROSIVE	CAB 36 ARCHIVE	10500 GM	500 GM	
1114	MUCILAGE (SWE)		11625			CAB 32-2	10100 ML	100 ML	
611	MULTI ELEMENT			CORROSIVE	Y	2X HNO3	CAB 37 ARCHIVE	21500 ML	1000 ML
778	MULTI ELEMENT			CORROSIVE		10X HNO3	CAB 23-1	21500 ML	1000 ML
784	MULTI ELEMENT			CORROSIVE		20X HCL	CAB 37 ARCHIVE	21500 ML	1000 ML
823	MULTI ELEMENT			CORROSIVE		2X HNO3	CAB 23-3	21500 ML	1000 ML
827	MULTI ELEMENT					H2O	CAB 23-3	21500 ML	1000 ML
859	MULTI ELEMENT			CORROSIVE		10X HNO3	CAB 23-1	21500 ML	1000 ML
851	MULTI ELEMENT			CORROSIVE		5X HNO3/1% HF	CAB 23-2	21500 ML	1000 ML
852	MULTI ELEMENT			CORROSIVE		2X HNO3	CAB 23-1	21500 ML	1000 ML
856	MULTI ELEMENT			CORROSIVE		10X HCL	CAB 23-2	10500 ML	500 ML
858	MULTI ELEMENT			CORROSIVE	Y	5%HCl/5%HNO3	CAB 23-2	10500 ML	500 ML
859	MULTI ELEMENT			CORROSIVE		2X HNO3	CAB 23-1	21500 ML	1000 ML
860	MULTI ELEMENT			CORROSIVE	Y	5% HCL/5%HNO3	CAB 23-2	10500 ML	500 ML
861	MULTI ELEMENT			CORROSIVE		10X HNO3	CAB 23-2	51500 GM	2500 GM
862	MULTI ELEMENT			CORROSIVE		2X HNO3	CAB 23-1	21500 ML	1000 ML
868	MULTI ELEMENT			CORROSIVE		10XHNO3	CAB 23-2	21500 ML	1000 ML
914	MULTI ELEMENT			CORROSIVE		5% HNO3	CAB 22-4	21500 ML	1000 ML
938	MULTI ELEMENT			CORROSIVE		2X HNO3	CAB 23-4	10100 ML	500 ML
1045	MULTI ELEMENT			CORROSIVE		10X HNO3	CAB 37 ARCHIVE	10500 ML	500 ML
1073	MULTI ELEMENT			CORROSIVE		2X HNO3	CAB 37 ARCHIVE	10500 ML	500 ML
1079	MULTI ELEMENT			CORROSIVE	Y	5% HNO3	CAB 37 ARCHIVE	10500 ML	500 ML
1087	MULTI ELEMENT			CORROSIVE	Y	2X HNO3	CAB 37 ARCHIVE	21500 ML	1000 ML
1101	MULTI ELEMENT			CORROSIVE		50X HNO3	CAB 37 ARCHIVE	10500 ML	500 ML
1110	MULTI ELEMENT			CORROSIVE			CAB 37 ARCHIVE	10250 ML	250 ML
1311	MULTI ELEMENT			CORROSIVE		30X HCL	CAB 37 ARCHIVE	10500 ML	500 ML
1327	MULTI ELEMENT			CORROSIVE	Y	2X HNO3	CAB 37 ARCHIVE	10250 ML	250 ML
1362	MULTI ELEMENT			CORROSIVE		5% HNO3	CAB 37 ARCHIVE	10500 ML	500 ML
1587	MULTI ELEMENT			CORROSIVE		10X HCL	CAB 27-1	10500 ML	500 ML
1240	NUREZIDE						CAB 13-2	10 GM	10 GM
1016	N,N-DIETHYL-P-PHENYLENEDIAMINE	CSN12H2	99-98-1	3205	POISON		CAB 37 ARCHIVE	10125 ML	125 ML
1212	N-1-NAPHTHYLETHYLENEDIAMINE DIHYDROCHLORIDE	CI0H7HCN2CH2HN2-2HC	1465-25-4				CAB 13-2	101 GM	1 GM
420	N-BUTYL-ALCOHO	CH3(CH2)2CH2OH	71-31-3	1371	FLAMMABLE		CAB 19-1	10500 ML	500 ML
449	N-TRIDECANE	CH3(CH2)11CH3	629-50-3	2069			CAB 20-3	10100 GM	100 GM
1556	NAPHTHOL-2-3,6-BISULFOMIC ACID DISODIUM SALT	CI0H8O7S2					CAB 36 ARCHIVE	20250 GM / 28100 GM	700 GM
1216	NAPHTHYLAMINE-1-7-SULFOIC ACID	H2NC1GH6S03NA-H2O					CAB 13-2	21000 GM	200 GM
1276	NAPHTHYLAMINE-1-7-SULFOIC ACID	H2NC1OH6S03NA-H2O					CAB 13-3	21000 GM	200 GM
832	NEODYMIUM	HO	7647-01-0		CORROSIVE	10X HCL	CAB 23-3	10500 ML	50 ML
844	NEODYMIUM	HO			CORROSIVE	2X HNO3	CAB 23-4	21500 ML	1000 ML
903	NEODYMIUM	HO			CORROSIVE	2X HNO3	CAB 22-3	10500 ML	500 ML
1455	NEODYMIUM OXIDE	HO2O3	1313-97-1	1374			74	1050 GM / 10100 GM	150 GM
719	NICKEL	H1	7410-02-0	2093	FLAMMABLE	Y	CAB 7-2	10.3 GM	.3 GM
727	NICKEL	H1					CAB 23-3	1050 ML	50 ML

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 18 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	HSDS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
772	NICKEL	NI		CORROSIVE	Y			CAB 37 ARCHIVE	28100 ML	200 ML
800	NICKEL	NI	7697-37-2	CORROSIVE	Y		10% HNO3	CAB 23-3	1850 ML	50 ML
847	NICKEL	NI		CORROSIVE	Y		21% HNO3	CAB 23-4	28500 ML	1000 ML
1058	NICKEL	NI						CAB 37 ARCHIVE	18125 ML	125 ML
1151	NICKEL CYCLOHEXANE-BUTYRATE	NI(CO2CH)2H7C12	3906-55-6					74	185 GH	5 GH
376	NICKEL OXIDE	NI2O	1313-19-1	POISON	Y			CAB 36 ARCHIVE	1810 GH	10 GH
725	NICKEL PIECES	NI	7440-02-0	FLAMMABLE SOLID	Y			CAB 7-2	28250 GH	500 GH
718	NICKEL WIRE	NI	7440-02-0	FLAMMABLE SOLID	Y			CAB 7-2	18430 GH / 18360 GH	810 GH
230	NICKELOUS NITRATE	NI(NO3)2-4H2O	13138-15-9	OXIDIZER	Y			CAB 4-1	48500 GH	2000 GH
410	NICKELOUS NITRATE	NI(NO3)2-6H2O	13138-15-9	OXIDIZER	Y			CAB 8-3	18300 GH	500 GH
1658	NICKELOUS NITRATE	NI(NO3)2-4H2O	13138-15-9	OXIDIZER	Y			CAB 36 ARCHIVE	28500 GH	1000 GH
232	NICKELOUS SULFATE	NI(SO4)-6H2O	10101-17-0	POISON	Y			CAB 36 ARCHIVE	18125 GH	125 GH
233	NICKELOUS SULFATE	NI(SO4)-6H2O	10101-17-0	POISON	Y			CAB 4-3	28500 GH	1000 GH
1456	NIDIUM CARBIDE	HBC	12618-14-2					74	1825 GH	25 GH
520	NIDIUM CHLORIDE	HD	7430-03-1	CORROSIVE				CAB 12-5	18100 GH	100 GH
1157	NIDIUM METAL	XD	7410-03-1	FLAMMABLE				74	1850 GH	50 GH
3	NITRIC ACID	HN03	7697-37-2	CORROSIVE POISO	Y			143	282.5 LITERS	5 LITERS
6	NITRIC ACID	HN03	7697-37-2	CORROSIVE POISO	Y			143	48500 GH	2000 GH
15	NITRIC ACID	HN03	7697-37-2	CORROSIVE POISO	Y			HD 4	18250 GH / 18360 GH	750 GH
577	NITRIC ACID	HN03	7697-37-2	CORROSIVE POISO	Y			CAB 2 UNDER STICK	148500 GH	7000 GH
580	NITRIC ACID	HN03	7697-37-2	CORROSIVE POISO	Y			ON TOP OF DRW 13	88500 GH	4000 GH
1342	NITRIC ACID	HN03	7697-37-2	POISON CORROSIV	Y			ORGANIC SNCH TOP	782500 GH / 18250 GH	18000 GH
1497	NITRIC ACID	HN03	7697-37-2	1314				CAB 34-4	18250 GH	400 GH
654	NITROGENETE	C4H5N02	58-15-3	2650	POISON			CAB 20-1	48 PT.	4 PTES
1203	NITRON	C20H16N4	2210-31-2					CAB 13-2	182 GH	2 GH
1246	NITROSO 1-2-NAPHTHOL	0HCl10H2O	131-91-9	1723				CAB 13-2	18100 GH	100 GH
525	NORMAL PARAFFIN HYDROCARBON	NPH	387	FLAMMABLE				68	1820 LITERS / 287 LITERS	34 LITERS
218	O-TOLUIDINE	4-(NH2)C6H3CH3C6H3NH2	612-02-0	1400	POISON	Y		CAB 36 ARCHIVE	181000 GH	1000 GH
350	O-TOLUIDINE DIYMBACHLORIDE	[C3-4-C(CH3)2H2]C6H3[2-CHCl]	1101	POISON	Y			CAB 36 ARCHIVE	18125 GH	125 GH
1592	OIL PENETRATING									
810	OSMIUM TETRAOXIDE	0504	20811-12-0	POISON		1.504		CAB 21-7	1815 OZ.	15 OZ.
595	OSMIUM TETRAOXIDE SOL	0504	20811-12-0	POISON				HD 81	3825 ML / 18100 ML	175 ML
234	OXALIC ACID	HOOCCOOH-2H2O	144-62-7	1729	POISON CORROSIV	Y		HC CHIR	18100 ML	100 ML
439	OXALIC ACID	HOOCCOOH-2H2O	144-62-7	1729	POISON CORROSIV	Y		CAB 4-1	38500 GH	1500 GH
1125	OXALIC ACID	HOOCCOOH-2H2O	144-62-7	1729	POISON CORROSIV	Y		CAB 8-3	18300 GH	500 GH
595	OXIGEN	O2	7792-11-7	1406	OXIDIZER			HC CHIR	182 LB	3 LB
1193	P-BAB	(CH3)2CH2CH2CH2CHO	100-10-7					CAB 13-1	18500 GH / 18100 GH	600 GH
1537	P-BAB	(CH3)2CH2CH2CH2CHO	100-10-7					CAB 5-1	6825 GH / 18500 GH	550 GH
1649	P-BAB	(CH3)2CH2CH2CH2CHO	100-10-7					CAB 36 ARCHIVE	18500 GH	500 GH
1181	P-ANISOBENZOIC ACID							CAB 13-1	1850 GH	50 GH
1203	P-BROMOKANDELIC ACID	BrC6H4CH2CO2H	6190-50-7	1709				CAB 13-3	2810 GH	20 GH
1250	P-PHENYLALIOBENZOIC CHLORIDE	C6H4CH2CO2HCl						CAB 13-2	18100 GH	100 GH
791	PALLADIUM	Pd		CORROSIVE		10% HCl		CAB 37 ARCHIVE	18500 ML	500 ML
872	PALLADIUM	Pd		CORROSIVE		10% HCl		CAB 22-2	18500 ML	500 ML
403	PALLADIUM CHLORIDE	PdCl2	7647-10-1	2346	POISON			CAB 12-3	3825 GH	75 GH
1450	PALLADIUM CHLORIDE	PdCl2	7647-10-1	2346	POISON			74	1850 GH / 1810 GH	40 GH
419	PALLADIUM II CHLORIDE	PdCl2	7647-10-1	2346	POISON			DESC 2	1825	25 GH
537	PALMOLIVE DISH SOAP							UNDER KITCHEN SINK	2822 OZ.	46 OZ.

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 19 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	NSCS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
544	PAM VEG COOKING SPRAY							KITCHEN CABINET	2814 OZ.	28 OZ.
670	PARAFFIN OIL							CAB 20-3	161 LITER	1 LITER
1646	PARTICLE SIZE 10 MICRON		8012-95-1	2629				CAB 21-3	1815 ML	15 ML
1643	PARTICLE SIZE 102 MICRON							CAB 21-3	1815 ML	15 ML
1648	PARTICLE SIZE 251 MICRON							CAB 21-3	28200 GR	100 GR
1649	PARTICLE SIZE 499 MICRON							CAB 21-3	28200 GR	400 GR
1645	PARTICLE SIZE 600 NANOMETER							CAB 21-3	1815 ML	15 ML
1644	PARTICLE SIZE 700 NANOMETER							CAB 21-3	1815 ML	15 ML
1647	PARTICLE SIZE 800 NANOMETER							CAB 21-3	1815 ML	15 ML
1510	PESTICIDE (INSTY)							CAB 21-7	1816 OZ.	16 OZ.
37	PETROLEUM ETHER							FRIE.	38500 ML	1500 ML
645	PETROLEUM ETHER							CAB 19-4	180 PT	8 PINT
155	PH STO	XH2P04						DESC 1	185 GR	5 GR
954	PH STO	XH2P04						DESC 1	185 GR	5 GR
957	PH STO	XH						DESC 1	185 GR	5 GR
958	PH STO	XF						DESC 1	185 GR	5 GR
939	PH STO	XHP						DESC 1	1820 GR	20 GR
1247	PHENANTHROLINE	C12H8N2	66-71-7	1421 POISON				CAB 13-3	2810 GR	20 GR
1716	PHENANTHROLINE 1-10 MONOHYDRATE	C12H8N2-H2O	5144-67-0	1421 POISON				CAB 13-2	4850 GR	200 GR
1107	PHENANTHROLINE FERROUS SULFATE 1-10	[C12H8N2]3Fe15O4		1421 POISON				CAB 37 ARCHIVE	28125 ML	250 ML
13	PHENANTHROLINE FERROUS SULFATE SOL'N 1-10	[C12H8N2]3Fe15O4						CAB 27-3	48100 ML	400 ML
1019	PHENANTHROLINE FERROUS SULFATE-10	[C12H8N2]3Fe15O4						CAB 37 ARCHIVE	18125 ML	125 ML
235	PHENOL	C6H5OH	108-95-2	1422 POISON				CAB 36 ARCHIVE	38200 GR	500 GR
236	PHENOL	C6H5OH	108-95-2	1422 POISON				CAB 4-2	28500 GR	1000 GR
303	PHENOL	C6H5OH	108-95-2	1422 POISON				CAB 4-4	187500 GR	8200 GR
413	PHENOL	C6H5OH	108-95-2	1422 POISON				CAB 37 ARCHIVE	18500 ML	500 ML
332	PHENOL HYDRAZINE							CAB 37 ARCHIVE	18125 ML	125 ML
1249	PHENOL RED	C10H14O5S	143-71-0	1423				CAB 13-2	3125 GR / 181 GR	75 GR
1250	PHENOL RED BOTTIC SALT	C10H14O5S	143-71-0	1423				CAB 13-2	185 GR	5 GR
1247	PHENOLPHTHALEIN	C20H14O3	77-01-0	2918 POISON FLAMMABLE				CAB 13-2	1850 GR / 1825 GR	75 GR
1251	PHENYLHANURIC ACETATE	C6H5COCH3	62-39-1	POISON				CAB 13-2	18100 GR	100 GR
634	PHOSPHATE	PO4	7778-77-0	18515 CORROSIVE	H2O			CAB 23-4	18500 ML	500 ML
1642	PHOSPHATE	PO4	7778-77-0	18515 CORROSIVE	H2O			CAB 37 ARCHIVE	128100 ML	1200 ML
603	PHOSPHOROUS	P	7647-01-0	CORROSIVE	.051 HCL			CAB 23-3	3850 ML	150 ML
653	PHOSPHOROUS	P	7647-01-0	CORROSIVE				CAB 23-3	1850 ML	50 ML
238	PHOSPHOROUS ACID	H3PO3	13350-31-2	CORROSIVE				CAB 4-2	38500 GR	1500 GR
1145	PHOSPHOROUS PENTOXIDE	P2O5	1314-54-3	1430 POISON				CAB 36 ARCHIVE	18500 GR	500 GR
237	PHOSPHOTUNGSTIC ACID	P2O5-24V03-N2O	12017-19-1	2349 CORROSIVE				CAB 36 ARCHIVE	18125 GR	125 GR
239	PHthalic Acid	C6H4-1,2-(CO2H)2	68-91-3					CAB 4-2	18500 GR	500 GR
1552	PIFIRON FELLETS							147	6810 CAPS./TUBE	680 CAPS.
1252	PONTACKOKE BLUE BLACK							CAB 13-2	1850 GR	50 GR
1668	PORTLAND CEMENT BLUE CAP	NBS 435						CAB 21-2 DESC.	283 VIALS	6 VIALS
1609	PORTLAND CEMENT GREEN CAP	NBS 658						CAB 21-2 DESC.	182 VIALS/ 183 VIALS	5 VIALS
345	POTASSIUM OXALATE SAT'D	ZOH		CORROSIVE				CAB 37 ARCHIVE	18250 ML	250 ML
521	POTASSIUM	X						CAB 37 ARCHIVE	28500 ML	1000 ML
812	POTASSIUM	X	7647-01-0	CORROSIVE	12 HCL			CAB 23-3	1850 ML	50 ML
810	POTASSIUM	X		CORROSIVE	22 HNO3			CAB 23-4	28500 ML	1000 ML
818	POTASSIUM	X		CORROSIVE	22 HNO3			CAB 22-3	18500 ML	500 ML
2163	POTASSIUM	X		CORROSIVE	22 HNO3			CAB 23-3	1850 ML	50 ML
210	POTASSIUM ACETATE	CH3COOK	127-00-2	2384				CAB 4-2	28500 GR	1000 GR

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 20 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	HSIS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
1142	POTASSIUM ACID PHthalate	KOCOHIO4	877-24-7	1440				CAB 31-2	181/4 LB	1/4 LB
1290	POTASSIUM ACID PHthalate	KOCOHIO4	877-24-7	1440				CAB 13-4	760 GM	760 GM
1141	POTASSIUM BICHROMATE	KBrO3	1434	POISON				CAB 36 ARCHIVE	18500 GM	500 GM
241	POTASSIUM BIPHTHALATE	1-KOCOC(=O)-2-COOH	877-21-7	1440	CORROSIVE			CAB 4-2	18500 GM	500 GM
450	POTASSIUM BIPHTHALATE	1-KOCOC(=O)-2-COOH	877-21-7	1440	CORROSIVE			CAB 9-4	182500 GM	10500 GM
243	POTASSIUM BISULFATE	KHSO4	7646-13-7	2305	CORROSIVE			CAB 36 ARCHIVE	18500 GM	500 GM
244	POTASSIUM BISULFATE	KHSO4	7646-13-7	2305	CORROSIVE			CAB 4-8	502500 GM	5000 GM
245	POTASSIUM BROMIDE	KBr	7759-01-2	2306	POISON OXIDIZER			CAB 4-2	18125 GM	125 GM
246	POTASSIUM CARBONATE	K2CO3	584-08-7	2875				CAB 4-2	18500 GM	500 GM
1661	POTASSIUM CARBONATE	K2CO3	584-08-7	2875				CAB 36 ARCHIVE	18500 GM	500 GM
1149	POTASSIUM CARBONATE ANHYDROUS	K2CO3	584-08-7	2875				CAB 36 ARCHIVE	18500 GM	1500 GM
240	POTASSIUM CHLORATE	KClO3	3011-01-9	2307	OXIDIZER			CAB 4-2	18500 GM	500 GM
249	POTASSIUM CHLORIDE	KCl	7447-40-7	1790				CAB 4-3	50500 GM	2500 GM
356	POTASSIUM CHLORIDE	KCl	7447-40-7	1790				DESC 1	1810 GM	10 GM
423	POTASSIUM CHLORIDE	KCl	7447-40-7	1790				CAB 9-2	18500 GM	500 GM
402	POTASSIUM CHLORIDE	KCl	7447-40-7	1790				CAB 12-3	38100 GM	300 GM
565	POTASSIUM CHLORIDE	KCl	7447-40-7	1790				CAB 12-4	18100 GM	100 GM
163	POTASSIUM CHLORIDE	KCl	7447-40-7	1790				DESC 2	18100 GM / 2850 GM	200 GM
143	POTASSIUM CHLORIDE	KCl	7447-40-7	1790				CAB 31-2	50500 GM	500 GM
207	POTASSIUM CHLORIDE	KCl	7447-40-7	1790				CAB 13-4	50100 GM	500 GM
366	POTASSIUM CHLORITE	KCl	7447-40-7	1790				DESC 8	1825 GM	25 GM
576	POTASSIUM CHLOROPLATINATE	K2PtCl6	16721-30-5					CAB 36 ARCHIVE	185 GM / 18100 GM	105 GM
927	POTASSIUM CHROMATE	K2CrO4	7769-00-6	1533				CAB 36 ARCHIVE	1850 GM	50 GM
251	POTASSIUM CITRATE	HOC(COOK)2(CW2COO4)2-	6100-05-6	2308				CAB 4-3	28250 GM	500 GM
		H2O								
253	POTASSIUM COBALTYANIDE	K3Co(CN)6			POISON			CAB 36 ARCHIVE	18410 GM / 18500 GM	910 GM
253	POTASSIUM CYANIDE	KCN	151-50-8	1437	POISON			CAB 4-3	18500 GM	500 GM
425	POTASSIUM CYANIDE	KCN	151-50-8	1437	POISON			CAB 36 ARCHIVE	18500 GM	500 GM
424	POTASSIUM DICHROMATE	K2Cr2O7	7778-50-9	1434	POISON CORROSIV	Y		CAB 9-2	182500 GM / 18500 GM	3000 GM
150	POTASSIUM DICHROMATE	K2Cr2O7	7778-50-9	1434	POISON CORROSIV	Y		DESC 1	1850 GM / 1850 GM / 182 GM	82 GM
147	POTASSIUM DICHROMATE	K2Cr2O7	7778-50-9	1434	POISON CORROSIV	Y		CAB 31-3	18500 GM	500 GM
266	POTASSIUM DICHROMATE	K2Cr2O7	7778-50-9	1434	POISON CORROSIV	Y		CAB 13-4	18168/168100GM / 1810 GM	101168 GM
308	POTASSIUM DICHROMATE	K2Cr2O7	7778-50-9	1434	POISON CORROSIV	Y		CAB 37 ARCHIVE	28125 GM	250 GM
518	POTASSIUM DICHROMATE	K2Cr2O7	7778-50-9	1434	POISON CORROSIV	Y		STIRRATION PUMP TOP	1825 GM	25 GM
472	POTASSIUM DICHROMATE	K2Cr2O7	7778-50-9	1434	POISON CORROSIV	Y		CAB 36 ARCHIVE	28100 GM	1000 GM
256	POTASSIUM DIHYDROGEN ARSENATE	AsK2O3			POISON			CAB 36 ARCHIVE	18250 GM	250 GM
566	POTASSIUM DIHYDROGEN PHOSPHATE	KH2PO4	7778-77-0	1786				CAB 12-4	1825 GM	25 GM
216	POTASSIUM DIHYDROGEN PHOSPHATE	KH2PO4	7778-77-0	1786				DESC 6	1825 GM	25 GM
291	POTASSIUM DIHYDROGEN PHOSPHATE	KH2PO4	7778-77-0	1786				CAB 13-4	28250 GM	100 GM
251	POTASSIUM FERRICYANIDE	K3Fe(CN)6	13746-61-2	1703	POISON			CAB 36 ARCHIVE	28500 GM	1000 GM
397	POTASSIUM FLUORIDE	KF	7709-23-3	1771	POISON CORROSIV			DESC 4	1825 GM / 28100 GM	225 GM
252	POTASSIUM FLUORIDE	KF	7709-23-3	1771	POISON CORROSIV			CAB 4-3	182500 GM	6000 GM
127	POTASSIUM FLUORIDE	KF	7709-23-3	1771	POISON CORROSIV			CAB 9-2	18500 GM	500 GM
167	POTASSIUM FLUORIDE	KF	7709-23-3	1771	POISON CORROSIV			CAB 31-3	188500 GM	5000 GM
210	POTASSIUM FLUORIDE	KF	7709-23-3	1771	POISON CORROSIV			CAB 13-4	28250 GM	100 GM
155	POTASSIUM METAFLUOROTITANATE	K2TiF6	16919-27-0					CAB 36 ARCHIVE	18500 GM	500 GM
242	POTASSIUM HYDROGEN PHthalate	HOOCCH2COOK	877-21-7	1440	CORROSIVE			CAB 4-2	18500 GM	500 GM
184	POTASSIUM HYDROGEN PHthalate	KOCOHIO4	877-21-7	1440	CORROSIVE			CAB 12-3	18250 GM	250 GM
761	POTASSIUM HYDROGEN PHthalate	1-KOCOC(=O)-2-COOH	877-21-7	1440	CORROSIVE			DESC 1	1850 GM / 1830 GM / 18100 GM	180 GM

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 21 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	HSDS & CLASSIFICATION	C P MATRIX	LOCATION	UNITS/SIZE	TOTAL
1302	POTASSIUM HYDROGEN PHthalate	1-XOCOC(=O)-2-COOH	877-21-7	1440 CORROSIVE		CAB 13-6	48160 GM	400 GM
151	POTASSIUM HYDROGEN PHthalate pH STD	1-XOCOC(=O)-2-COOH	877-21-7	1440 CORROSIVE		DESC 1	185 GM	5 GM
1212	POTASSIUM HYDROGEN TARTRATE	(KHC(H)COO) ₂	921-53-9	2356 CORROSIVE		CAB 13-4	28100 GM	300 GM
44	POTASSIUM HYDROIZIDE	KOH	1310-58-3	1442 CORROSIVE POISON		95	384 LITERS	12 LITERS
454	POTASSIUM HYDROIZIDE	KOH	1310-58-3	1442 POISON CORROSIV		CAB 9-2	18300 GM	500 GM
1140	POTASSIUM HYDROIZIDE	KOH	1310-58-3	1442 CORROSIVE POISON		CAB 31-2	128560 GM	6000 GM
1338	POTASSIUM HYDROIZIDE	KOH	1310-58-3	1442 POISON CORROSIV		CAB 37 ARCHIVE	18300 ML	50 ML
211	POTASSIUM IODATE	KIO ₃	7758-05-6	2258 OXIDIZER		CAB 3-7	128500 GM	6000 GM
257	POTASSIUM IODATE	KIO ₃	7758-05-6	2258 OXIDIZER		CAB 4-4	98125 GM / 18100 GM	1100 GM
428	POTASSIUM IODATE	KIO ₃	7758-05-6	2258 OXIDIZER		CAB 9-2	18125 GM	125 GM
473	POTASSIUM IODATE	KIO ₃	7758-05-6	2258 OXIDIZER		DESC 3	182 GM / 1810 GM	12 GM
1070	POTASSIUM IODATE	KIO ₃	7758-05-6	2258 OXIDIZER		CAB 37 ARCHIVE	18100 ML / 18500 ML	150 ML
1100	POTASSIUM IODATE	KIO ₃	7758-05-6	2258 OXIDIZER		CAB 37 ARCHIVE	18100 ML	100 ML
1346	POTASSIUM IODATE	KIO ₃	7758-05-6	2258 OXIDIZER		CAB 36 ARCHIVE	18100 GM / 18100 GM	600 GM
1395	POTASSIUM IODATE	KIO ₃	7758-05-6	2258 OXIDIZER		CAB 27-3	1815 ML	25 ML
259	POTASSIUM IODIDE	KI	7681-11-0	1745		CAB 4-4	18500 GM / 18250 GM	2250 GM
429	POTASSIUM IODIDE	KI	7681-11-0	1745		CAB 9-2	28500 GM	1000 GM
974	POTASSIUM IODIDE	KI	7681-11-0	1745		DESC 3	182 GM	2 GM
1011	POTASSIUM IODIDE	KI	7681-11-0	1745		DESC 5	1823 GM	25 GM
1663	POTASSIUM IODIDE	KI	7681-11-0	1745		CAB 36 ARCHIVE	18300 GM	500 GM
1414	POTASSIUM IODIDE / POTASSIUM IODATE	KI/KIO ₃				CAB 34-6	184000 ML	6000 ML
261	POTASSIUM IODATE	KIO ₃	7757-77-1	1419 OXIDIZER		CAB 4-4	28500 GM	1000 GM
430	POTASSIUM NITRATE	KNO ₃	7757-77-1	1419 OXIDIZER		CAB 9-2	18500 GM	500 GM
1159	POTASSIUM NITRATE	KNO ₃	7757-77-1	1419 OXIDIZER		CAB 36 ARCHIVE	18300 GM	1500 GM
262	POTASSIUM NITRATE	KNO ₃	7758-05-6	2707 OXIDIZER/POISON		CAB 4-4	48500 GM	2000 GM
264	POTASSIUM OXALATE	K2C2O4-H2O	6407-10-5	1444 CORROSIVE		CAB 4-4	38300 GM	1500 GM
492	POTASSIUM OXALATE SAT'D		503-52-8	2353		CAB NO END	18250 ML	250 ML
1323	POTASSIUM OXALATE SAT'D		503-52-8	2353		CAB 37 ARCHIVE	18250 ML	250 ML
925	POTASSIUM PERIODATE	KIO ₄	7730-21-8	1781 OXIDIZER		CAB 36 ARCHIVE	28100 GM	200 GM
215	POTASSIUM PERMANGANATE	KMnO ₄	7722-14-7	1445 OXIDIZER CORROS		CAB 4-4	128500 GM	1000 GM
431	POTASSIUM PERMANGANATE	KMnO ₄	7722-14-7	1445 OXID CORROSIVE		CAB 9-3	38500 GM	1500 GM
749	POTASSIUM PERMANGANATE	KMnO ₄	7722-14-7	1445 CORROSIVE OXIDI		185	188 LITERS	8 LITERS
1139	POTASSIUM PERMANGANATE	KMnO ₄	7722-14-7	1445 OXIDIZER CORROS		CAB 31-2	128500 GM	1000 GM
1116	POTASSIUM PERMANGNATE	KMnO ₄	7722-14-7	1445 OXIDIZER CORROS		CAB 36 ARCHIVE	28300 GM	1600 GM
246	POTASSIUM PERSEFATE	K2S2O8	7727-21-1	1446 OXIDIZER		CAB 4-5	38300 GM	2500 GM
432	POTASSIUM PERSULFATE	K2S2O8	7727-21-1	1446 OXIDIZER		CAB 9-3	18500 GM	500 GM
1152	POTASSIUM PERSULFATE	K2S2O8	7727-21-1	1446 OXIDIZER		CAB 36 ARCHIVE	18300 GM	500 GM
267	POTASSIUM PHOSPHATE	KH2PO ₄	7778-77-0	1786		CAB 4-5	48500 GM	3000 GM
213	POTASSIUM PHOSPHATE	KH2PO ₄	7778-77-0	1786		CAB 36 ARCHIVE	2811340 GM	22680 GM
433	POTASSIUM PHOSPHATE	KH2PO ₄	7778-77-0	1786		CAB 9-3	38300 GM / 182500 GM	4000 GM
932	POTASSIUM PHOSPHATE	KH2PO ₄	7778-77-0	1786		DESC 3	1825 GM / 1810 GM	35 GM
1151	POTASSIUM PHOSPHATE	KH2PO ₄	7778-77-0	1786		CAB 31-3	28300 GM	500 GM
1645	POTASSIUM PHOSPHATE	KH2PO ₄	7778-77-0	1786		CAB 36 ARCHIVE	18300 GM	500 GM
210	POTASSIUM PHOSPHATE DIBASIC	KH2PO ₄	7758-11-4	2286		CAB 4-5	48500 GM	3000 GM
940	POTASSIUM PHOSPHATE DIBASIC	KH2PO ₄	7758-11-4	2286		CAB 36 ARCHIVE	18300 GM	500 GM
513	POTASSIUM PHthalate	KHC(H)COO				CAB 32-4	18100 GM	100 GM
926	POTASSIUM PHthalate Acid	KHC(H)COO				CAB 36 ARCHIVE	1830 GM	50 GM
268	POTASSIUM PYROANTIMONATE					CAB 36 ARCHIVE	18100 GM	100 GM
259	POTASSIUM PYROSULFATE	K2S2O7	7750-62-7	2367	POISON	CAB 36 ARCHIVE	18300 GM	500 GM
1611	POTASSIUM SAT'D					CAB 21-2 DESC.	181 VIAL	1 VIAL

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 22 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	MSDS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
270	POTASSIUM SODIUM TARTARATE	KOC(OCH(OH)2COO)4H2	304-57-6	1841				CAB 4-5	128500 GH	6000 GH
434	POTASSIUM SODIUM TARTARATE	KOC(OCH(OH)2COO)4H2	304-59-6	1841				CAB 4-5	18500 GH	500 GH
271	POTASSIUM SULFATE	K2SO4	7778-00-5	1844				CAB 4-5	38500 GH	1500 GH
435	POTASSIUM SULFATE	K2SO4	7778-00-5	1844				CAB 4-5	18500 GH	500 GH
1376	POTASSIUM SULFATE	K2SO4	7778-00-5	1844				DESC II DENSITY INCH TOP	1850 GH	50 GH
273	POTASSIUM TARTRATE	KOC(OCH(OH)2COO)C1/2H2	921-53-1	2356				CAB 4-6	18500 GH	500 GH
1293	POTASSIUM TETROXIRATE	CHH2CO4H2CO2H2-2H2O						CAB 13-4	18100 GH	100 GH
274	POTASSIUM THIOCYANATE	KSCN	333-20-2	1447	POISON			CAB 4-6	28500 GH	1000 GH
436	POTASSIUM THIOCYANATE	KSCN	333-20-0	1447	POISON			CAB 4-6	28500 GH	1000 GH
1144	POTASSIUM THIOCYANATE	KSCN	333-20-2	1447	POISON			CAB 36 ARCHIVE	18500 GH	500 GH
906	PRASEODIMIUM	PA						CAB 22-4	28500 TL	1000 ML
275	PRASEODYMIUM ACETATE	(CH3COO)3Pr-3H2O	6192-12-7	14271	POISON			CAB 36 ARCHIVE	18150 GH	150 GH
1459	PRASEODYMIUM NITRATE	Pr(NO3)3-6H2O	15978-77-0	3320				74	1825 GH / 1820 GH	45 GH
1468	PRASEODYMIUM OXIDE	Pr6O11	12037-28-5	1416				74	1810 GH / 1825 GH	35 GH
629	PROPANAL-2							CAB 13-1	181 LITER	1 LITER
574	PROPANE	CH3CH2CH3	74-98-6	14271	FLAMMABLE				181 LB	1 LB
463	PROPANE FUEL	C3H8	74-98-6	14271	FLAMMABLE				181 LB	7 LB
671	PROPYLENE CARBONATE	OCH(CH3)CH2COO						CAB 20-2	18500 ML	500 ML
677	PYRIDINE	C5H5N	110-85-1	1455	FLAMMABLE			CAB 20-3	381 PT.	3 PINTS
1251	PIPIXYLAZO 4-2 RESOPCIOL	O=C(OCH2C6H4C6H3(=O)N)C6H4C6H3(=O)N						CAB 13-2	385 GH	15 GH
1254	PYRIDYLALO1-2-2 NAPHTHOL	2								10 GH
		N-C6H5-CHEN-CHEN-CHEN-C10H19								
		4OH								
1255	PYROCATECHOL VIOLET	OCC6H3-4								
1098	PYROCATECHOL VIOLET 1%									
1257	PYROCATECHOLSULFOPHENYLAEIN	HOSO2C6H4C6H3-3,4I								
		OH21C6H3-3-OH-4O								
		H								
144	PYROGALLIC ACID	C6H3(OH)3	87-46-1	1457	POISON					
278	QUINHYDRO	C12H16O4	106-31-3	1818	POISON					
277	QUINOLINOL-8	HOCH3SH:CH:CH:CH								
437	QUINOLINOL-8	HOCH3OX								
1241	REB ORGANIC DYE									
607	REDUCTANT									
601	REFERENCE ELECTRODE FILLING SOLN									
585	REFERENCE ELECTRODE SOLUTION									
534	RESIN	AB50V-X4								
1447	RESIN	AB50V-X4								
1475	REINHOLD FOMBER	RE								
1474	REINHOLD TRICHLORIDE	RECL3	7410-15-5		FLAMMABLE SOLID					
1043	ROGDANINO ACETONE		13569-63-6							
1477	RUBIDIUM TRICHLORIDE	RHCl3-H2O	20765-98-4	2358	POISON					
1117	RIV SILICON RUBIDIUM									
1253	ROSE BENZAL	C20H5Cl4H2A2O5	632-69-9							
873	RUBIDIUM	Rb								
908	RUBIDIUM	Rb								
1462	RUBIDIUM	Rb								

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 23 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	MSDS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
1476	RUBIDIUM CARBONATE	Rb2CO3	501-07-0	OXIDIZER				74	2810 GM / 2850 GM	70 GM
457	RUBIDIUM CHLORIDE	RbCl	7781-11-9					CAB 36 ARCHIVE	181 GM	1 GM
1478	RUBIDIUM CHLORIDE	RbCl	7781-11-9					74	1825GM/265GM/1850GM/1810 GM	103 GM
460	RUBIDIUM NITRATE	RbNO3	13125-12-0	3369 OXIDIZER				DESC 2	4810 GM	40 GM
1150	RUBIDIUM NITRATE	RbNO3	13125-12-0	3367 OXIDIZER				CAB 36 ARCHIVE	1850 GM	50 GM
1479	RUBIDIUM NITRATE	RbNO3	13125-12-0	3367 OXIDIZER				74	1850 GM	50 GM
1480	RUBIDIUM OXIDE	Rb2O	10676-11-4	CORROSIVE				74	2425 GM	50 GM
1481	RUBIDIUM SULFATE	Rb2SO4	7469-51-2					74	1810 GM	10 GM
674	RUTHENIUM	Ru		CORROSIVE				105 HCL	18500 ML	500 ML
754	ALTHEKELUM POWDER	Ru	7440-18-8	FLAMMABLE				CAB 7-4	185 GM	5 GM
1482	RUTHENIUM SULFATE	Ru2S04						74	185 GM	1 GM
1198	S-DIFLUOROLEANBAZIDE	C6H5(C(=O)C6H5)C(=O)C6H5	110-22-7					CAB 13-1	28100 GM	200 GM
207	SALICYLIC ACID	OCOC(=O)COCH3	49-72-7	1160 POISON				CAB 3-7	18500 GM	500 GM
1074	SALT							DOCK	1850 LB	50 LBS
825	SEPARIUM	SK		CORROSIVE				CAB 23-4	18500 ML	500 ML
903	SAMARIUM	SK		CORROSIVE				CAB 22-4	18500 ML	500 ML
1483	SAMARIUM NITRATE	SmNO3	13759-03-6	OXIDIZER				74	1825 GM	25 GM
916	SAMARIUM OXIDE	Sm2O3	12650-58-1	1922				DESC 2	185 GM	5 GM
1484	SAMARIUM OXIDE	Sm2O3	12010-50-1	1922				74	2425 GM / 185 GM	70 GM
441	SAND							CAB 36 ARCHIVE	185 GM	5 GM
1485	SCANDIUM NITRATE	Sc(NO3)3		OXIDIZER				74	215 GM	10 GM
1470	SCANDIUM OXIDE	Sc2O3	12010-08-1					74	215 GM	500 GM
467	SELENIUM	SE		CORROSIVE				21 HNO3	18500 ML	500 ML
1488	SELENIUM	SE		CORROSIVE				101 HNO3	2850 ML	100 ML
1384	SELENIUM	SE		CORROSIVE				21 HNO3	18500 ML	500 ML
1517	SELENIUM IV/V OXIDE	SeO2	7446-08-4	1756 POISON				CAB 12-5	4810 ML	40 GM
755	SELENIUM METAL	Se	7712-13-2	1756 POISON				CAB 7-4	185 GM	3 GM
753	SELENIUM SODIUM	Se	7712-19-2	1756 POISON				CAB 7-4	18100 GM	100 GM
271	SILICA	SiO2	14608-10-7	2147				CAB 36 ARCHIVE	18500 GM	500 GM
1410	SILICA FUMES							CAB 21-2 DESC.	181 VIAL	1 VIAL
298	SILICIC ACID	SiO2	7439-11-4	2516				CAB 3-7	18500 GM	1500 GM
281	SILICON	Si	7440-21-3	2616				CAB 36 ARCHIVE	18500 GM	500 GM
361	SILICON	Si						ROUT CART RM A	18500 ML	500 ML
562	SILICON	Si						CAB 23-3	1850 ML	50 ML
810	SILICON	Si						CAB 23-3	1850 ML	50 ML
1692	SILICON	Si						CAB 27-1	18500 ML	500 ML
1513	SILICON METAL (URPS)	Si	7440-21-3	2616				CAB 7-4	185 GM	5 GM
474	SILICON OXIDE	SiO2	1069-28-6	FLAMMABLE				CAB 36 ARCHIVE	185 GM	5 GM
280	SILICOTUNGSTIC ACID (URACK)	SiO2:12V2O3-24H2O	12370-60-6	1972 CORROSIVE				CAB 36 ARCHIVE	1850 GM	50 GM
701	SILVER	Ag		CORROSIVE				CAB 37 ARCHIVE	28100 ML	200 ML
431	SILVER	Ag	7447-37-2	CORROSIVE				101 HNO3	18500 ML	50 ML
433	SILVER	Ag		CORROSIVE				21 HNO3	18500 ML	500 ML
882	SILVER	Ag		CORROSIVE				21 HNO3	18500 ML	500 ML
1574	SILVER	Ag		CORROSIVE				CAB 22-3	18500 ML	500 ML
1486	SILVER CHLORIDE	AgCl	7743-90-6	3092				74	1810 GM	10 GM
1485	SILVER CYCLOHEXANE BUTYRATE	AgO2C10H17	62638-04-1	18951				74	1825 GM	25 GM
710	SILVER METAL PRECIPITATE	Ag	7440-22-4	2583				CAB 7-4	18401	1 QT.
438	SILVER NITRATE	AgNO3	7761-99-9	1472	POISON OXIDIZER	Y		CAB 4-8	18125 GM	1375 GM
510	SILVER NITRATE	AgNO3	7761-69-8	1472	POISON	Y		CAB 12-5	1850 GM	150 GM

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 24 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	NDS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
765	SILVER NITRATE	AGNO3	7741-02-8	1472 OXIDIZER POISON	Y			CAB 37 ARCHIVE	16100 ML	100 KL
1005	SILVER NITRATE	AGNO3	7741-02-8	1472 OXIDIZER POISON	Y			DESC 5	1610 GH	10 GH
1444	SILVER NITRATE	AGNO3	7741-02-8	1472 OXIDIZER POISON	Y			CAB 36 ARCHIVE	164000 GH	1600 GH
1037	SILVER NITRATE FOR STANDARDIZING	AGNO3	7741-02-8	1472 OXIDIZER POISON				FRRIG IN LAB SH-2	16250 ML	250 KL
511	SILVER NITRATE STD. SOLN	AGNO3	7741-02-8	1472 POISON OXIDIZER				CAB 22-3	161 LITER	1 LITER
744	SILVER OXIDE	AG2O	20667-12-3	2814 OXIDIZER				CAB 7-4	1650 GH	100 GH
1408	SILVER OXIDE	AG2O	20667-12-3	2814 OXIDIZER				74	1610/3.4 GH	113.4 GH
282	SILVER PEROXIDE	AgO	1301-91-8	1472 OXIDIZER				CAB 36 ARCHIVE	165 GH	5 GH
1409	SILVER SULFATE	Ag2SO4	10234-21-5	2800				74	1620 GH / 16250 GH	275 GH
1407	SILVER FLUORIDE	AgF	7775-41-9					74	1650 GH	50 GH
775	SODIUM	NA		16141 CORROSIVE				CAB 37 ARCHIVE	20100 ML	200 KL
807	SODIUM	NA	7647-01-0	16141 CORROSIVE				CAB 23-3	16500 ML	50 KL
819	SODIUM	NA		16141 CORROSIVE				CAB 23-4	20500 ML	1000 KL
564	SODIUM	NA		16141 CORROSIVE				CAB 22-4	16500 ML	500 KL
1222	SODIUM	NA						CAB 23-3	1650 ML	50 ML
221	SODIUM ACETATE	CH3COOKA-3H2O	6131-10-4	1475 CORROSIVE				CAB 5-1	16500 GH	4500 GH
439	SODIUM ACETATE	CH3COOKA-3H2O	6131-10-4	1475 CORROSIVE				CAB 9-4	20500 GH	1000 GH
1153	SODIUM ACETATE	CH3COOKA-3H2O	6131-10-4	1475 CORROSIVE				CAB 31-3	16850 GH	5500 GH
1411	SODIUM ACETATE	CH3COOKA-3H2O	6131-10-4	1475 CORROSIVE				CAB 34-6	161000 ML	10000 ML
349	SODIUM ALUMINATE	NA202-AL20S-3H2O	1302-42-7	1620				GROUT CART RM A	162500 GH	15000 GH
203	SODIUM ARSENITE	NaAsO2	7431-02-2	3001 POISON				CAB 36 ARCHIVE	16500 GH	500 GH
268	SODIUM AZIDE	NaN3	21620-22-8	1479 POISON				CAB 36 ARCHIVE	16500 GH	500 GH
296	SODIUM BICHLOROTE	CaH5ClO2Na	532-32-3					CAB 5-1	16500 GH	500 GH
285	SODIUM BICARBONATE	NaHCO3	144-55-4	1480 CORROSIVE				CAB 9-4	16500 GH	3500 GH
449	SODIUM BICARBONATE	NaHCO3	144-55-4	1480 CORROSIVE				CAB 31-3	168500 GH	500 GH
1154	SODIUM BICARBONATE	NaHCO3	144-55-4	1480 CORROSIVE				CAB 12-3	2050 ML	500 GH
1518	SODIUM BICARBONATE	NaHCO3	144-55-4	1480 CORROSIVE						60 ML
1039	SODIUM BIS(2-METHOXYETHoxy) ALUMINUM HYDROXIDE 70% BENZENE	NaAl(OH)2-2C6H5	10034-50-5	2263 POISON CORROSIV				FRRIG IN LAB SH-3	16500 ML	500 KL
206	SODIUM BISULFATE	NaHSO3	7631-10-5	2276 CORROSIVE				CAB 36 ARCHIVE	20500 GH	1000 GH
287	SODIUM BISULFITE	NaHSO3	7631-10-5	2276 CORROSIVE				CAB 5-1	16500 GH	2000 GH
445	SODIUM BISULFITE	NaHSO3	7631-10-5	2276 CORROSIVE				CAB 9-4	16500 GH	1000 GH
289	SODIUM BORATE	Na2B4O7-10H2O	1303-74-1	1483				CAB 5-1	16500 GH	500 GH
276	SODIUM BROMATE	NaBrO3	16110-16-2	FLAMM FOTS CORR				CAB 5-1	16100 GH	100 GH
201	SODIUM BROMATE	NaBrO3	7781-58-0	2552 OXIDIZER				CAB 36 ARCHIVE	16500 GH	500 GH
304	SODIUM BROMIDE	NaBr	7647-15-6	1695				CAB 5-1	16500 GH	500 GH
504	SODIUM BROMIDE	NaBr	7647-15-6	1695				CAB 12-3	2025 GH	50 GH
933	SODIUM BROMIDE	NaBr	7647-15-6	1695				CAB 36 ARCHIVE	16250 GH	250 GH
1035	SODIUM BROMIDE	NaBr	7647-15-6	1695				DESC 8	1610 GH	10 GH
1015	SODIUM BROMINE	NaBr						DESC 5	1625 GH	25 GH
292	SODIUM CARBONATE	Na2CO3	497-19-8	1484				CAB 5-2	168500 GH	8500 GH
300	SODIUM CARBONATE	Na2CO3	497-19-8	1484				CAB 6-4	1625 GH	10 GH
374	SODIUM CARBONATE	Na2CO3	497-19-8	1484						1625 GH
412	SODIUM CARBONATE	Na2CO3	497-19-8	1484				DESC 3	1610 GH/1620 GH/1620 GH	65 GH
405	SODIUM CARBONATE	Na2CO3	497-19-8	1484				CAB 12-3	162500 GH / 168100 GH	7100 GH
507	SODIUM CARBONATE	Na2CO3	497-19-8	1484				CAB 12-4	16100 GH	100 GH
914	SODIUM CARBONATE	Na2CO3	497-19-8	1054				DESC 2	16100 GH	100 GH
978	SODIUM CARBONATE	Na2CO3	497-19-8	1164				DESC 3	1610 GH/1620 GH/1620 GH	65 GH
995	SODIUM CARBONATE	Na2CO3	497-19-8	1164				DESC 4	1630 GH	50 GH
1009	SODIUM CARBONATE	Na2CO3	497-19-8	1164				DESC 5	1630 GH	50 GH
1168	SODIUM CARBONATE	Na2CO3	497-19-8	1484				CAB 31-4	161500 GH	6000 GH

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 25 of 35)

四

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 26 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	HSOS & CLASSIFICATION	C	MATRIX	LOCATION	UNITS/SITE	TOTAL
1177	SODIUM HYDROXIDE FELLETS	NAOH	1310-73-2	1105 CORROSIVE POISON			CAB 31-5	582.5 KG	12.5 KG
313	SODIUM IODIDE	NAI	7681-02-5	1420 CORROSIVE			CAB 36 ARCHIVE	48125 GR / 18500 GR	1250 GR
318	SODIUM META-SILICATE	NA2SiO3·9H2O	6831-91-0	1784 POISON			CAB 5-3	18500 GR	500 GR
317	SODIUM POLYSILICATE	NA2SiO3·10H2O	7631-95-0	1501			CAB 5-3	18500 GR	500 GR
314	SODIUM NITRATE	NAHNO3	7631-99-4	1504 OXIDIZER			CAB 3-4	172500 GR	2500 GR
348	SODIUM NITRATE	NAHNO3	7631-99-4	1504 OXIDIZER			GROUT CART RM A	1582500 GR	37500 GR
452	SODIUM NITRATE	NAHNO3	7631-99-4	1504 OXIDIZER			CAB 9-5	28500 GR	1000 GR
473	SODIUM NITRATE	NAHNO3	7631-99-4	1504 OXIDIZER			CAB 11-5	512.5 KG	12,500 KG
508	SODIUM NITRATE	NAHNO3	7631-99-4	1504 OXIDIZER			CAB 12-4	2825 GR	50 GR
916	SODIUM NITRATE	NAHNO3	7631-99-4	1504 OXIDIZER			DESC 4	2825 GR	50 GR
1008	SODIUM NITRATE	NAHNO3	7631-99-4	1504 OXIDIZER			DESC 5	1810 GR	10 GR
1019	SODIUM NITRATE	NAHNO3	7631-99-4	1504 OXIDIZER			DESC 6	1850 GR	50 GR
1175	SODIUM NITRATE	NAHNO3	7631-99-4	1504 OXIDIZER			CAB 31-4	38500 GR	1500 GR
9	SODIUM NITRATE	NAHNO2	7632-00-0	1495 OXIDIZER POISON			CAB 31-3	18500 GR	500 GR
345	SODIUM NITRATE	NAHNO2	7632-00-0	1495 OXIDIZER			GROUT CART RM A	481000 GR / 178500 GR	12500 GR
516	SODIUM NITRATE	NAHNO2	7632-00-0	1495 POISON OXIDIZER			DESC 6	1850 GR	50 GR
519	SODIUM NITRATE	NAHNO2	7632-00-0	1495 POISON OXIDIZER			DESC 7	1810 GR	10 GR
950	SODIUM NITRATE	NAHNO2	7632-00-0	1495 OXIDIZER			DESC 3	1830 GR	30 GR
1007	SODIUM NITRATE	NAHNO2	7632-00-0	1495 OXIDIZER			DESC 5	18100 GR	100 GR
1469	SODIUM NITRITRATE CRYSTALS	NAHNO2	7632-00-0	1495 POISON OXIDIZER			CAB 31-3	38014.5 GR	551 GR
455	SODIUM NITROFERRICYANIDE	NA2FeCN5O2·2H2O	14402-89-2	1693 POISON			CAB 9-5	18500 GR	500 GR
319	SODIUM OXALATE	NaOCOOCHA	42-76-0	1507			CAB 5-5	158500 GR	7500 GR
458	SODIUM OXALATE	NaOCOOCHONa	62-74-0	1507			CAB 1-5	18500 GR	500 GR
514	SODIUM OXALATE	Na2C2O4	62-74-0	1507			CAB 12-4	18100 GR	160 GR
952	SODIUM OXALATE	Na2C2O4	62-74-0	1507			DESC 1	1810 GR	10 GR
1174	SODIUM OXALATE	NaOCOOCHA	62-76-0	1507			CAB 31-4	18500 GR	500 GR
1297	SODIUM OXALATE	Na2C2O4	62-76-0	1507			CAB 13-4	38100 GR / 181 GR	501 GR
530	SODIUM OXIDE	NAO					CAB 36 ARCHIVE	182 GR	2 GR
320	SODIUM PERCHLORATE	NaClO4·H2O	7791-07-3	2105 OXIDIZER			CAB 36 ARCHIVE	1850 GR / 18500 GR	550 GR
461	SODIUM PERCHLORATE	NaClO4·H2O	7791-07-3	2105 OXIDIZER			CAB 36 ARCHIVE	182.5 KG	2.5 KG
321	SODIUM PERSULFATE	Na2S2O8	7775-27-1	2313 OXIDIZER			CAB 5-5	28500 GR	1000 GR
1240	SODIUM PERMANEATE	Na4[TeO4]					CAB 13-2	182 GR	2 GR
323	SODIUM PHOSPHATE DIBASIC	Na2HPO4·12H2O	7782-05-6	1851			CAB 5-5	18500 GR	500 GR
322	SODIUM PHOSPHATE MONOBASIC	NaH2PO4·H2O	10049-21-5	2060			CAB 5-5	158500 GR	7500 GR
312	SODIUM PHOSPHATE MONOBASIC	NaH2PO4·H2O	10019-21-5	2060			GROUT CART RM A	382500 GR / 182500 GR	10350 GR
1014	SODIUM PHOSPHATE MONOBASIC	NaH2PO4·H2O	10049-21-5	2060			DESC 5	1830 GR	50 GR
1170	SODIUM PHOSPHATE MONOBASIC	NaH2PO4·H2O	7558-03-75	1350			CAB 31-4	38500 GR	1500 GR
457	SODIUM PHOSPHATE TRIBASIC	Na3PO4·12H2O	10101-09-0	1509			CAB 5-5	18500 GR	500 GR
1029	SODIUM PHOSPHATE TRIBASIC	Na3PO4·12H2O	10101-07-0	1509			DESC 8	115 GR	5 GR
1163	SODIUM PHOSPHATE TRIBASIC	Na3PO4·12H2O	10101-09-0	1509	CORROSIVE		CAB 31-4	38500 GR	1500 GR
324	SODIUM PYROMPHOSPHATE	Na4P2O7·16H2O	7722-08-5	1510			CAB 5-5	48500 GR	2000 GR
469	SODIUM PYROMPHOSPHATE	Na4P2O7·10H2O	7722-08-5	1510			CAB 11-2	18500 GR	500 GR
481	SODIUM SELENATE	Na2SeO4	13110-01-0		Poison		CAB 12-3	38100 GR	500 GR
502	SODIUM SELENITE	Na2SeO3	10102-18-8	2809			CAB 12-4	28100 GR	200 GR
470	SODIUM SILICATE	Na2SiO3·9H2O	1344-04-0	1784	Poison		CAB 11-2	18500 GR	500 GR
325	SODIUM SULFATE	Na2SO4	7757-82-6	1621			CAB 5-5	48500 GR	2000 GR
326	SODIUM SULFATE	Na2SO4·10H2O	7727-73-3	1621			CAB 5-6	256500 GR	12500 GR
458	SODIUM SULFATE	Na2SO4·10H2O	7737-07-6	1621			CAB 5-5	38500 GR	1500 GR
511	SODIUM SULFATE	Na2SO4·10H2O	7757-82-6	1621			CAB 12-4	1825 GR / 18100 GR	125 GR
1028	SODIUM SULFATE	Na2SO4·10H2O	7757-02-6	1621			DESC 5	1850 GR	50 GR

Table A-4. 2222-SA Chemical Inventory by Common Name. (sheet 27 of 35)

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 28 of 35)

SEC.	COMMON NAME	FORMULA	CAS NUMBER	MSDS #	CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
380	STD 1AC10-1	HClO4			CORROSIVE				CAB 37 ARCHIVE	181 LITER	1 LITER
1441	STD 1AC11	TCE							CAB 33-5	1850 ML	50 ML
249	STD 17C9-4 Cd METAL	CD			POISON	Y		HNO3	CAB 37 ARCHIVE	18125 ML	125 ML
1057	STD 17C9-5 CADMIUM	CD			CORROSIVE	Y		2L HNO3	CAB 27-3	18500 ML	500 ML
1578	STD 18C15A	SO4 STOCK							FRIGD 2	18500 ML	500 ML
1431	STD 1IC11	ON5TO							CAB 33-3	18225 ML	350 ML
1426	STD 1IC11	HNO3							CAB 33-3	1850 ML	50 ML
1325	STD 1IC11H NITRIC ACID	HNO3							CAB 37-6	1850 ML	50 ML
1446	STD 1IC11O	HNO3							CAB 33-6	381000 ML	3000 ML
1354	STD 1IC9-30 AMK	AMK SOL'H							CAB 37-6	181 LITER	1 LITER
1320	STD 1IC9-33 ALUMINUM -10 STD 20CL17 AA STD								CAB 37-6	18500 ML	500 ML
787	STD 20CB CERIC SULFATE	CESO4							CAB 33-1	18225 ML	475 ML
1319	STD 23C15C BORIC ACID STOCK SOL'H								CAB 23-1	18500 ML	3000 ML
316	STD 23C15-C BORIC ACID	HNO2			CORROSIVE				CAB 36-6	18250 ML	250 ML
310	STD 24C9-10 HNO2	HNO2							CAB 37 ARCHIVE	18250 ML	500 ML
1312	STD 24C9-5 MANGANESE OXIDE	MN(HB2O3)							CAB 37 ARCHIVE	18100 ML	100 ML
1417	STD 25C11	AA STD 5							CAB 33-1	18225 ML	475 ML
1418	STD 2AC11	CH3OTV							CAB 33-1	3120 ML	420 ML
10	STD 2AC11 AA STD								CAB 33-1	9425 ML	225 ML
1349	STD 2AC13B RUTHENIUM CHLORIDE	Ru(Cl)Cl							CAB 37 ARCHIVE	18250 ML	250 ML
1095	STD 27C7-1 PHENYLCHLORIC ACETATE								CAB 37 ARCHIVE	18125 ML	125 ML
1422	STD 2FC11	F-CH3							CAB 33-2	18225 ML	250 ML
1316	STD 2Cl0-34 HYDROCHLORIC ACID	HCl							CAB 37-6	18250 ML	500 ML
614	STD 2Cl0-41 HYDROCHLORIC ACID	HCl			CORROSIVE				CAB 41-2	28500 ML	1000 ML
604	STD 2Cl11 SYN. FEAL								COUNTER NO. END	2825 ML	50 ML
1423	STD 2Cl16	FeCl3							CAB 33-2	5125 ML	125 ML
810	STD 2Cl5-A CHROMIUM	Cr(CrH)(O3)-9H2O							CAB 23-1	18500 ML	500 ML
1415	STD 3Cl0-2	HNO3				Y		H2O	CAB 33-1	18225 ML / 181000 ML	1475 ML
1438	STD 3IC11	18K-IFE							CAB 33-3	18250 ML	3000 ML
34	STD 3IC15 BODIUM FLUORIDE	KF							FRIG 6	18500 ML	500 ML
1344	STD 3IC9-5 MAGNESIUM CHIPS	Mg		7481-49-6	1491	POISON	Y		CAB 37-6	14250 ML	250 ML
1341	STD 3IC9-6 MAGNESIUM	Mg							CAB 37-6	18100 ML	100 ML
1431	STD 3IC11	20X							CAB 33-3	16850 ML	500 ML
1335	STD 33C-AN ALUM EARTH STOCK SOL'H	LA(HB2O3)							CAB 37 ARCHIVE	18125 ML	125 ML
1332	STD 33C9-A LAUNTHANUS	LA2O3							CAB 37 ARCHIVE	18100 ML	100 ML
1329	STD 33C9-AN LAUNTHANUS LA(HB2O3)-6H2O	LA(HB2O3)-6H2O							CAB 37 ARCHIVE	28125 ML	250 ML
316	STD 33C95 NO2O3	NO2O3							CAB 37 ARCHIVE	18125 ML	125 ML
1350	STD 33CP LA2O3	LA(LA2O3)							CAB 37-6	18100 ML	100 ML
1434	STD 34C11	ICP-1							CAB 33-3	98100 ML	900 ML
600	STD 35C10-2 NITRIC ACID								X CHTR END	181 LITER	1 LITER
1435	STD 35C11	ICP-2							CAB 33-1	118100 ML	1100 ML
1421	STD 36C11	CO(NH2)4							CAB 33-2	9150 ML	400 ML
1071	STD 3AC9-2 SELENIUM	Se							CAB 37-6	18250 ML	250 ML
526	STD 3AC9-3 HYDRID CAL10 STOCK								CAB 37 ARCHIVE	18125 ML	125 ML
1428	STD 37C11	KOH							CAB 33-3	17825 ML	425 ML
1074	STD 37C9-1 MERCURY	Hg(Hg)HgCl2							CAB 37-6	18250 ML	250 ML
615	STD 33C10-3 HYDROCHLORIC ACID	HCl			CORROSIVE				CAB 41-2	16500 ML	2000 ML
1419	STD 35C11	AFM							CAB 33-2	168100 ML	1600 ML
1440	STD 39C11	HH-20X							CAB 33-3	15850 ML	750 ML

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 29 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	NHOS & CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SIZE	TOTAL
1309	STD 3PC9 COBALT STOCK SOL'N	CO			2.05 X NHOS		CAB 26-2	18500 mL		500 mL
1654	STD 3PC9-L COBALT				.10 ULTREX NHOS		CAB 37 ARCHIVE	18500 mL		500 mL
1337	STD 3C9-15 IRON (HARD WIRE)	FE(HARD-WIRE)					CAB 37-6	18125 mL		125 mL
673	STD 4SC10 NITRIC ACID	HNO3		CORROSIVE			CAB 41 SHELF 3	181000 mL		1000 mL
419	STD 4SC11-16 NH3 CAC	NH3 CAC STOCK		CORROSIVE			CAB 37 ARCHIVE	18100 mL		100 mL
1583	STD 4SC11-18	QXAHU					FRIG DOOR TOP	181000 mL		100 mL
1430	STD 4IC11	F-18					CAB 33-3	3850 mL		150 mL
1423	STD 4SC11	SI					CAB 33-2	20225 mL		700 mL
1672	STD 4TC15 SILICON STOCK'N	H2SiO4					CAB 27-3	181 LITER		1 LITER
1113	STD 4SC10-15 SULFURIC ACID	CL-CAC		CORROSIVE			CAB 41-2	125000 mL		6000 mL
1584	STD 4SC11-1						FRIG DOOR BOTTOM	1850 mL		50 mL
1086	STD 4OC8-1 PHENYLHERMERIC ACETATE IX DIOXANE						CAB 37-6	18125 mL		125 mL
617	STD 5OC10-2 NITRIC ACID	NHOS		CORROSIVE			CAB 41-2	28500 mL		1000 mL
1437	STD 5IC11	TBP					CAB 33-4	48100 mL		400 mL
1338	STD 52C13A IRON 3	FE					CAB 37 ARCHIVE	18250 mL		250 mL
1420	STD 5SC11	CAC					CAB 33-2	92450 mL		150 mL
912	STD 5SC23	NH4O4					I02	158500 mL		7500 mL
*23	STD 5AC10-1 SULFURIC ACID	H2SiO4		CORROSIVE			CAB 41-3	181000 mL		1000 mL
21	STD 5SC15 TEST STD	CO3					FRIG	4850 mL		200 mL
612	STD 5TC15-4 LSR CARBON TETRACHLORIDE	CCl4	58-23-5	1102 FLAMMABLE POISON Y Y			CAB 19-3	181 LITER		1 LITER
1680	STD 5VC15-8 SILICON	SI					CAB 37 ARCHIVE	18500 mL		500 mL
1421	STD 62C11	ZnO2					CAB 33-2	1825 mL		100 mL
1423	STD 6SC13	PbO-PH					CAB 33-4	158100 mL		1500 mL
24	STD 6SC14	CO3					FRIG	8850 mL		400 mL
1321	STD 6C10-23 SODIUM HYDROXIDE	NaOH					CAB 37-6	18100 mL		100 mL
597	STD 6C10-32 SODIUM HYDROXIDE						W CHTR	18500 mL		500 mL
611	STD 6C10-45 SODIUM HYDROXIDE	NaOH		CORROSIVE			CAB 41-1	78500 mL		3500 mL
1333	STD 6C10-47	NaOH		CORROSIVE			CAB 26-3	18500 mL		1000 mL
1391	STD 6C11-L DIIONEX LNCS SOL'N						CAB 27-3	18100 mL		100 mL
1333	STD 6C9-4 MEBOXYKIN STOCK	H2O2S					CAB 37 ARCHIVE	18250 mL		250 mL
1613	STD 6C6-30 CHROMIUM STOCK SOL'N	CrCH2CA207					BENCH TOP	18500 mL		500 mL
25	STD 7OC11 10C	C					FRIG	6250 mL		400 mL
1397	STD 7OC14D	NH4Cl/NH4OH STOCK					CAB 34-1	18100 mL		100 mL
		SOL'N								
1343	STD 7SC13C STRONTIUM NITRATE	SR (SR)(HO)2					CAB 37-6	18100 mL		100 mL
35	STD 7AC15D SODIUM FLUORIDE	NaF	7681-49-4	1491 POISON			FRIG	181 LITER		1 LITER
1574	STD 7SC15	HI STOCK					FRIG 2	18500 mL		500 mL
1380	STD 7SC15	CL STOCK					FRIG 2	18500 mL		500 mL
1581	STD 7SC15	NH3 STOCK					FRIG 2	18500 mL		500 mL
33	STD 7SC15 F SOL'N	F					FRIG SH-2	18500 mL		500 mL
31	STD 7SC15B						FRIG	18500 mL		500 mL
1400	STD 7SC15	NH3					CAB 34-1	18100 mL		100 mL
1582	STD 7C110-18	PO4 CAN STOCK					FRIG DOOR TOP	18100 mL		100 mL
848	STD 8-C3 1A	Zn(ZnOCl2)					CAB 37 ARCHIVE	18250 mL		250 mL
1427	STD 8C11	NO3					CAB 33-3	10225 mL		250 mL
1331	STD 9-C6 COBALT METAL	COT(METAL)					CAB 37-6	18250 mL		250 mL
1311	STD 9PC8 WEPC (IRON) K2O						CAB 33-6	1825 mL		175 mL
1427	STD 9C11	IT5-GH					CAB 33-3	7825 mL		100 mL
1045	STD 9CB CERIC SULFATE	CaSO4					DENSITY BENCH TOP	18100 mL		100 mL
1397	STD L-10 NITRIC ACID	NHOS					CAB 34-1	18250 mL		250 mL

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 30 of 35)

EC#, COMMON NAME	CAS NUMBER	HS05 & CLASSIFICATION	G & MINIZ	LOCATION	UNITS/SIZE	TOTAL
1310 SITE L-10 SOL A-63						
1325 SURFACE ACID						
1327 SURFACE LUMIN						
1341 SURFACE LUMIN						
1345 SURFACE LUMIN						
1350 SURFACE LUMIN						
1355 SURFACE LUMIN						
1360 SURFACE LUMIN						
1365 SURFACE LUMIN						
1370 SURFACE LUMIN						
1375 SURFACE LUMIN						
1380 SURFACE LUMIN						
1385 SURFACE LUMIN						
1390 SURFACE LUMIN						
1395 SURFACE LUMIN						
1400 SURFACE LUMIN						
1405 SURFACE LUMIN						
1410 SURFACE LUMIN						
1415 SURFACE LUMIN						
1420 SURFACE LUMIN						
1425 SURFACE LUMIN						
1430 SURFACE LUMIN						
1435 SURFACE LUMIN						
1440 SURFACE LUMIN						
1445 SURFACE LUMIN						
1450 SURFACE LUMIN						
1455 SURFACE LUMIN						
1460 SURFACE LUMIN						
1465 SURFACE LUMIN						
1470 SURFACE LUMIN						
1475 SURFACE LUMIN						
1480 SURFACE LUMIN						
1485 SURFACE LUMIN						
1490 SURFACE LUMIN						
1495 SURFACE LUMIN						
1500 SURFACE LUMIN						
1505 SURFACE LUMIN						
1510 SURFACE LUMIN						
1515 SURFACE LUMIN						
1520 SURFACE LUMIN						
1525 SURFACE LUMIN						
1530 SURFACE LUMIN						
1535 SURFACE LUMIN						
1540 SURFACE LUMIN						
1545 SURFACE LUMIN						
1550 SURFACE LUMIN						
1555 SURFACE LUMIN						
1560 SURFACE LUMIN						
1565 SURFACE LUMIN						
1570 SURFACE LUMIN						
1575 SURFACE LUMIN						
1580 SURFACE LUMIN						
1585 SURFACE LUMIN						
1590 SURFACE LUMIN						
1595 SURFACE LUMIN						
1600 SURFACE LUMIN						
1605 SURFACE LUMIN						
1610 SURFACE LUMIN						
1615 SURFACE LUMIN						
1620 SURFACE LUMIN						
1625 SURFACE LUMIN						
1630 SURFACE LUMIN						
1635 SURFACE LUMIN						
1640 SURFACE LUMIN						
1645 SURFACE LUMIN						
1650 SURFACE LUMIN						
1655 SURFACE LUMIN						
1660 SURFACE LUMIN						
1665 SURFACE LUMIN						
1670 SURFACE LUMIN						
1675 SURFACE LUMIN						
1680 SURFACE LUMIN						
1685 SURFACE LUMIN						
1690 SURFACE LUMIN						
1695 SURFACE LUMIN						
1700 SURFACE LUMIN						
1705 SURFACE LUMIN						
1710 SURFACE LUMIN						
1715 SURFACE LUMIN						
1720 SURFACE LUMIN						
1725 SURFACE LUMIN						
1730 SURFACE LUMIN						
1735 SURFACE LUMIN						
1740 SURFACE LUMIN						
1745 SURFACE LUMIN						
1750 SURFACE LUMIN						
1755 SURFACE LUMIN						
1760 SURFACE LUMIN						
1765 SURFACE LUMIN						
1770 SURFACE LUMIN						
1775 SURFACE LUMIN						
1780 SURFACE LUMIN						
1785 SURFACE LUMIN						
1790 SURFACE LUMIN						
1795 SURFACE LUMIN						
1800 SURFACE LUMIN						
1805 SURFACE LUMIN						
1810 SURFACE LUMIN						
1815 SURFACE LUMIN						
1820 SURFACE LUMIN						
1825 SURFACE LUMIN						
1830 SURFACE LUMIN						
1835 SURFACE LUMIN						
1840 SURFACE LUMIN						
1845 SURFACE LUMIN						
1850 SURFACE LUMIN						
1855 SURFACE LUMIN						
1860 SURFACE LUMIN						
1865 SURFACE LUMIN						
1870 SURFACE LUMIN						
1875 SURFACE LUMIN						
1880 SURFACE LUMIN						
1885 SURFACE LUMIN						
1890 SURFACE LUMIN						
1895 SURFACE LUMIN						
1900 SURFACE LUMIN						
1905 SURFACE LUMIN						
1910 SURFACE LUMIN						
1915 SURFACE LUMIN						
1920 SURFACE LUMIN						
1925 SURFACE LUMIN						
1930 SURFACE LUMIN						
1935 SURFACE LUMIN						
1940 SURFACE LUMIN						
1945 SURFACE LUMIN						
1950 SURFACE LUMIN						
1955 SURFACE LUMIN						
1960 SURFACE LUMIN						
1965 SURFACE LUMIN						
1970 SURFACE LUMIN						
1975 SURFACE LUMIN						
1980 SURFACE LUMIN						
1985 SURFACE LUMIN						
1990 SURFACE LUMIN						
1995 SURFACE LUMIN						
2000 SURFACE LUMIN						
2005 SURFACE LUMIN						
2010 SURFACE LUMIN						
2015 SURFACE LUMIN						
2020 SURFACE LUMIN						
2025 SURFACE LUMIN						
2030 SURFACE LUMIN						
2035 SURFACE LUMIN						
2040 SURFACE LUMIN						
2045 SURFACE LUMIN						
2050 SURFACE LUMIN						
2055 SURFACE LUMIN						
2060 SURFACE LUMIN						
2065 SURFACE LUMIN						
2070 SURFACE LUMIN						
2075 SURFACE LUMIN						
2080 SURFACE LUMIN						
2085 SURFACE LUMIN						
2090 SURFACE LUMIN						
2095 SURFACE LUMIN						
2100 SURFACE LUMIN						
2105 SURFACE LUMIN						
2110 SURFACE LUMIN						
2115 SURFACE LUMIN						
2120 SURFACE LUMIN						
2125 SURFACE LUMIN						
2130 SURFACE LUMIN						
2135 SURFACE LUMIN						
2140 SURFACE LUMIN						
2145 SURFACE LUMIN						
2150 SURFACE LUMIN						
2155 SURFACE LUMIN						
2160 SURFACE LUMIN						
2165 SURFACE LUMIN						
2170 SURFACE LUMIN						
2175 SURFACE LUMIN						
2180 SURFACE LUMIN						
2185 SURFACE LUMIN						
2190 SURFACE LUMIN						
2195 SURFACE LUMIN						
2200 SURFACE LUMIN						
2205 SURFACE LUMIN						
2210 SURFACE LUMIN						
2215 SURFACE LUMIN						
2220 SURFACE LUMIN						
2225 SURFACE LUMIN						
2230 SURFACE LUMIN						
2235 SURFACE LUMIN						
2240 SURFACE LUMIN						
2245 SURFACE LUMIN						
2250 SURFACE LUMIN						
2255 SURFACE LUMIN						
2260 SURFACE LUMIN						
2265 SURFACE LUMIN						
2270 SURFACE LUMIN						
2275 SURFACE LUMIN						
2280 SURFACE LUMIN						
2285 SURFACE LUMIN						
2290 SURFACE LUMIN						
2295 SURFACE LUMIN						
2300 SURFACE LUMIN						
2305 SURFACE LUMIN						
2310 SURFACE LUMIN						
2315 SURFACE LUMIN						
2320 SURFACE LUMIN						
2325 SURFACE LUMIN						
2330 SURFACE LUMIN						
2335 SURFACE LUMIN						
2340 SURFACE LUMIN						
2345 SURFACE LUMIN						
2350 SURFACE LUMIN						
2355 SURFACE LUMIN						
2360 SURFACE LUMIN						
2365 SURFACE LUMIN						
2370 SURFACE LUMIN						
2375 SURFACE LUMIN						
2380 SURFACE LUMIN						
2385 SURFACE LUMIN						
2390 SURFACE LUMIN						
2395 SURFACE LUMIN						
2400 SURFACE LUMIN						
2405 SURFACE LUMIN						
2410 SURFACE LUMIN						
2415 SURFACE LUMIN						
2420 SURFACE LUMIN						
2425 SURFACE LUMIN						
2430 SURFACE LUMIN						
2435 SURFACE LUMIN						
2440 SURFACE LUMIN						
2445 SURFACE LUMIN						
2450 SURFACE LUMIN						
2455 SURFACE LUMIN						
2460 SURFACE LUMIN						
2465 SURFACE LUMIN						
2470 SURFACE LUMIN						
2475 SURFACE LUMIN						
2480 SURFACE LUMIN						
2485 SURFACE LUMIN						
2490 SURFACE LUMIN						
2495 SURFACE LUMIN						
2500 SURFACE LUMIN						
2505 SURFACE LUMIN						
2510 SURFACE LUMIN						
2515 SURFACE LUMIN						
2520 SURFACE LUMIN						
2525 SURFACE LUMIN						
2530 SURFACE LUMIN						
2535 SURFACE LUMIN						
2540 SURFACE LUMIN						
2545 SURFACE LUMIN						
2550 SURFACE LUMIN						
2555 SURFACE LUMIN						
2560 SURFACE LUMIN						
2565 SURFACE LUMIN						
2570 SURFACE LUMIN						
2575 SURFACE LUMIN						
2580 SURFACE LUMIN						
2585 SURFACE LUMIN						
2590 SURFACE LUMIN						
2595 SURFACE LUMIN						
2600 SURFACE LUMIN						
2605 SURFACE LUMIN						
2610 SURFACE LUMIN						
2615 SURFACE LUMIN						
2620 SURFACE LUMIN						
2625 SURFACE LUMIN						
2630 SURFACE LUMIN						
2635 SURFACE LUMIN			</td			

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 31 of 35)

REC.	COMMON NAME	FORMULA	GHS NUMBER	MSDS & CLASSIFICATION	C	P MATRIX	LOCATION	UNITS/SIZE	TOTAL		
1352	SULFURIC ACID	H2SO4	7664-93-9	1529 CORROSIVE			CAB 37 ARCHIVE	21500 ML	1000 ML		
1413	SULFURIC ACID	H2SO4	7664-93-9	1529 CORROSIVE			CAB 34-6	11500 ML	500 ML		
1363	SURFASIL							310 ML / 16100 ML	330 ML		
1449	TALC							16500 GH	500 GH		
808	TANTALUM	TA	7697-37-2	CORROSIVE			CAB 23-3	21500 ML	100 ML		
870	TANTALUM	TA					CAB 22-2	16500 ML	500 ML		
1359	TANTALUM	TA					CAB 27-1	16500 ML	500 ML		
1417	TANTALUM (VI) FLUORIDE	TAFS	7703-71-3				75	1625 GH	25 GH		
747	TANTALUM OXIDE	TA	7410-25-7	2953			CAB 7-4	18.1 GH	.1 GH		
1496	TANTALUM PENTACHLORIDE	TACLS	7721-01-9	CORROSIVE			75	16100 GH	100 GH		
729	TANTALUM RODS	TA	7410-25-7	2953			CAB 7-3	1610 GH / 10.1 GH	.7 GH		
730	TANTALUM SHEET	TA	7410-25-7	2953			CAB 7-3	1610 GH	10 GH		
731	TANTALUM WIRE	TA	7410-25-7	2953			CAB 7-3	16.1 GH	.1 GH		
748	TANTALUM WIRE	TA	7410-25-7	2953			CAB 7-4	16.2 GH	.2 GH		
223	TARTARIC-B ACID	HOOC(CH2OH)2COOH	87-69-1	2168			CAB 6-1	16500 GH	3500 GH		
463	TARTARIC-B ACID	HOOC(CH2OH)2COOH	87-69-1	2168			CAB 11-3	16500 GH	500 GH		
1272	TARTARIC-B ACID	(HOOC)(CH2OH)2(COOH)	87-69-1	2168			CAB 31-4	16500 GH	500 GH		
1105	TCL STOCK SOLUTION						CAB 27-1	16500 ML	500 ML		
750	TELLURIUM PIECES	TE	13491-00-9	2245	POISON FLAMMABLE		CAB 7-4	16100 GH	100 GH		
756	TELLURIUM POWDER	TE	13491-00-9	2245	POISON FLAMMABLE		CAB 7-4	101 GL	1 GL		
749	TELLURIUM SHOT	TE	13491-00-9	2245	POISON FLAMMABLE		CAB 7-4	16500 GH	50 GL		
695	TERBIUM	T9			CORROSIVE	21 HN03	CAB 22-1	26500 ML	1000 ML		
1415	TERBIUM NITRATE	TB(II)O3·4	13595-35-5	—	OB/DIEP		75	181 GH	.1 GH		
1471	TERBIUM OXIDE	TB(IV)7	12037-61-3				74	16100 GH	100 GH		
1478	TERBIUM OXIDE	TB4O7	12037-61-3				75	385 GH	.5 GH		
1371	TETRACHLOROETHYLENE				POISON FLAMMABLE			SHC TOP BY DENSITY METER 2820 GL	40 GL		
347	TETRACHLOROPHTHALIC ACID		117-08-0	Y	CORROSIVE			CAB 36 ARCHIVE	16200 GH	200 GH	
1364	TETRACHLOROETHYLENE	Cl2C=CCl2	127-18-1	1118	CARCINOGEN	Y	152	282 LITER	4 LITER		
1276	TETRAZO-2',4',5',7'-,8-OFLUORENEEIN	O-NO2C6H4C(Cl)=C6H-2,4- 12-3(O)OC6H-5,7-12- -6-OK					CAB 13-3	1625 GH	25 GH		
1277	TETRAETHYL-AMMONIUM IODIDE	(CH3)4N+I-	75-52-1				CAB 13-3	16100 GH	100 GH		
681	TETRAPROPYLAMMONIUM HYDROXIDE	(CH3)3N+(CH2)4OH	1499-26-1		POISON CORROSIVE		CAB 20-4	31 LITER / 2500 ML	31 LITER		
1638	TGA METAL ALUMEL						CAB 21-3	160.95 GH	0.05 GH		
1640	TGA METAL MISAT-50						CAB 21-3	101.20 GH	1.20 GH		
1642	TGA METAL IRON						CAB 21-5	160.20 GH	0.20 GH		
1639	TGA METAL NICKEL						CAB 21-3	160.15 GH	0.15 GH		
1641	TGA METAL PERKALLOY						CAB 21-5	160.60 GH	0.60 GH		
526	THENOYLTRIFLUOROACETONE	CH3CO2F3S	326-91-0	1720			62	281 KG / 38100 GH	2300 GH		
1042	THERMOMETERS MURRAY						118	31 THERMOMETERS	31 THERMOMETERS		
348	THIOACETANIDE	CH3CSNH2	62-55-5	2291	POISON	Y		CAB 36 ARCHIVE	16125 GH / 16500 GH	425 GH	
1279	THIOUREA	NH2CSNH2	62-56-6	1539	POISON	Y		CAB 13-3	16250 GH	250 GH	
1275	THORIUM	2-(HO)2ASO4-H3N+H-1	132-33-2					CAB 13-3	1625 GH	25 GH	
1272	THORIUM-BORATE AMARANTH DYE	-Cl(OH)-2-OH-3,6					CAB 13-3	162 GH	2 GH		
910	THORIUM	TH103			CORROSIVE	21 HN03	CAB 22-4	28500 ML	1000 ML		
1509	THORIUM CHLORIDE	TH103	13517-10-3				75	16268	.2 GH		
1472	THORIUM OXIDE	TH203	12035-41-1				74	16100 MH	100 MH		
1493	THORIUM OXIDE	TH203	12034-41-1				75	161 GH	.1 GH		
1274	THYROL BLUE		76-61-9				CAB 13-3	165 GH	.5 GH		

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 32 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	MSDS # CLASSIFICATION	C	P XATRII	LOCATION	UNITS/SIZE	TOTAL
1273	THIOPHATHALEIN	C28H36O4	125-20-2	1627			CAB 13-3	2025 GH	30 GH
1280	THIOLSULFOPHENOPHTHALEIN	(C6H4S(=O)(=O)OC(C6H2-2-CH3)-S-4-OH-SCH(CH3)2)					CAB 13-3	185 GH	5 GH
712	TIN	Sn					CAB 23-1	18500 ML	500 ML
713	TIN	Sn					CAB 27 ARCHIVE	18500 ML	2000 ML
819	TIN	Sn	7447-01-0				CAB 23-3	2820 ML	100 ML
824	TIN	Sn					CAB 23-4	28500 ML	1000 ML
829	TIN	Sn					CAB 23-4	18500 ML	500 ML
716	TIN METAL GRANULAR	Sn	7440-31-5	2064	FLAMMABLE	20% HCl	CAB 7-2	28100 GH	400 GH
715	TIN XRDY	Sn	7440-31-5	2064	FLAMMABLE		CAB 7-2	18125 GH / 1810 GH	135 GH
717	TIN SHOT	Sn	7440-31-5	2064	FLAMMABLE		CAB 7-2	18100 GH / 1825 GH	125 GH
715	TISAB						CAB 22-6	143875 ML	3875 ML
1405	TISAB V(1)						CAB 31-3	81500 ML	4000 ML
102	TITANIUM	Ti	7447-01-0		CORROSIVE	40% HCl	CAB 23-3	18500 ML	50 ML
875	TITANIUM	Ti				H2O	CAB 22-7	18500 ML	500 ML
1016	TITANIUM	Ti				H2O	CAB 27-1	18500 ML	500 ML
25	TITANIUM CHLORIDE	TiCl4	7553-15-6	2080	POISON CORROSIV		KD 4	1 1 L	1 L
757	TITANIUM CLEANED	Ti	7440-31-5	2064	FLAMMABLE		CAB 7-4	185 GH	5 GH
711	TITANIUM HYDRIDE	TiH2	7701-18-5		FLAMMABLE		CAB 7-4	18100 GH	100 GH
712	TITANIUM HYDRIDE MESH FOUNDER	TiH2	7701-18-5		FLAMMABLE		CAB 7-4	281000 GH	2000 GH
393	TITANIUM OXIDE	TiO2	1317-80-2	1540			CAB 36 ARCHIVE	182 GH	2 GH
738	TITANIUM POWDER	Ti	7440-32-6	2083	FLAMMABLE		CAB 7-4	18100 GH	100 GH
342	TITANIUM SULFATE	TiO5(OH)2SO4-8H2O					CAB 36 ARCHIVE	18500 GH / 18100 GH	100 GH
710	TITANIUM WIRE	Ti	7440-32-6	2083	FLAMMABLE		CAB 7-3	1875 GH / 1825 GH	100 GH
455	TOLUENE	C6H5CH3	108-08-3	1560	POISON FLAMMABLE		CAB 20-5	284 LITER	8 LITER
1346	TOLUENE	C6H5CH3	108-08-3	1560	POISON FLAMMABLE		150	285 ML	10 ML
458	TOLUENE PURIFIED	C6H5CH3	108-08-3	1560	FLAMMABLE POISO	Y	CAB 20-1	281 LITER	2 LITER
921	TRACE ELEMENTS					H2O	CAB 22-5	18500 ML	500 ML
1603	TRACE METAL (NP175 CONC 2)						CAB 21-2	8820 ML	120 ML
1614	TRACE METAL (NP178 CONC 12 43562 GC MP 207)						CAB 21-3	1820 ML	20 ML
1613	TRACE METAL (NP178 CONC 4)						CAB 21-3	1820 ML	20 ML
1512	TRACE METAL SGC16						GRACIS CART RM A	18500 ML	500 ML
1605	TRACE METALS (NP175 CONC 3)						CAB 21-2	8820 ML	100 ML
1601	TRACE METALS (NP175 CONC1)						CAB 21-2	8820 ML	160 ML
1607	TRACE METALS (NP178 CONC 2)						CAB 21-2	8820 ML	160 ML
1606	TRACE METALS (NP5-378)						CAB 21-2	16820 ML	200 ML
1617	TRACE METALS EPA QC (NP1183 III:CONC 1)						CAB 21-3	5820 ML	100 ML
1618	TRACE METALS EPA QC (NP1183 III:CONC 2)						CAB 21-3	5820 ML	100 ML
1615	TRACE METALS EPA QC (NP284 I:CONC 2)						CAB 21-3	5820 ML	100 ML
1616	TRACE METALS EPA QC (NP284 I:CONC 2)						CAB 21-3	3820 ML	10 ML
1628	TRACE METALS NP980 CONC. 1						CAB 21-5	9820 ML	180 ML
1621	TRACE METALS NS378 CONC. 1						CAB 21-5	10820 ML	200 ML
151	TRANS-1,2-DI(METHOXY)CYCLOHEXANE-N,N,N',N'-TETRAACETIC ACID	C4H10O4N(CH2CO2H)2	11121-22-6	1947	CORROSIVE		CAB 3-1	238100 GH	2300 GH
		H2O							
461	TRI-BUTYL PHOSPHATE IN XPM 16.66%						CAB 20-2	18500 ML	500 ML
342	TRI-BUTYL PHOSPHATE	[CH3(CH2)3O]3P(O)			CORROSIVE		CAB 21-2	18250 ML	250 ML
651	TRI-BUTYL PHOSPHATE	[CH3(CH2)3O]3P(O)	126-73-8	1739	FLAMMABLE		CAB 19-5	281 GAL	2 GALLON
156	TRI-BUTYL PHOSPHATE	[CH3]2CH2CH2CH2O]3P(O)	126-73-8	1739	FLAMMABLE		CAB 20-1	18500 ML	2000 ML
440	TRI-BUTYL PHOSPHATE	[CH3(CH2)3O]3P(O)	126-73-8	1739	FLAMMABLE		CAB 20-2	308100 ML / 18500 ML	3500 ML
1396	TRI-BUTYL PHOSPHATE	[CH3(CH2)3O]3P(O)			FLAMMABLE		40	187 LITER	7 LITER

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 33 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	HSNS & CLASSIFICATION	C P MATRIX	LOCATION	UNITS/SIZE	TOTAL
52	TRI-BUTYL PHOSPHATE IN NMP (251-751)							
527	TRI-BUTYL PHOSPHATE IN NMP 30X							
617	TRI-ISO-OCTYLAMINE	(C8H17)3N	25519-14-0	1577 FLAMMABLE	CAB 24-2	18500 ML	500 ML	
655	TRI-ISO-OCTYLAMINE	(C8H17)3N	25549-14-0	1577	CAB 24-2	18100 ML	100 ML	
664	TRI-ISO-OCTYLAMINE	(C8H17)3N	25519-14-0	1577	CAB 20-4	48500 GR	3000 GR	
677	TRI-N-OCTYLAMINE	(CH3)3(CH2)7CH3	1114-74-3	2066	CAB 20-1	48500 ML	3000 ML	
687	TRI-N-OCTYLAMINE	(C8H17)3P(0)	78-50-2	1542	CAB 20-3	128500 ML	5500 ML	
1540	TRI-(N-CYANOMETHYL)-AMMONIUM CHLORIDE	CH3N(CLN)C6H17)3	5137-55-1	1737 POISON FLAMMABLE	CAB 6-1	188100 GR	6000 GR	
625	TRICLOROACETIC ACID	CCl3COOH	76-03-0	1882 CORROSIVE	CAB 19-1	18500 GR	500 GR	
351	TRICHLOROACETIC	CCl3COOH	76-03-0	1882 CORROSIVE	CAB 37 ARCHIVE	18125 GR	125 GR	
54	TRIETHANOLAMINE	(CH3CH2CH2)3N	102-71-5	1572 FLAMMABLE	CAB 36 ARCHIVE	14105 GR	125 GR	
533	TRIETHYLAMINE	(C2H5)3N	121-44-0	1573 FLAMMABLE CORRO	CAB 21-3	88500 ML	4000 ML	
673	TRIETHYLAMINE	(CH3)2CH2)3N	126-44-0	1573 FLAMMABLE POISON	A1	1821KG	2 KG	
523	TRILOCYLPHOSPHINE OXIDE	(CH3)2CH2)3PO	78-50-2	1542	CAB 20-4	182 KG	2 KG	
1340	TRIOTYLPHOSPHINE SULFIDE	(CH3)2CH2)3PS			CAB 62	38250 GR / 188100 GR	2350 GR	
354	TRIS HYDROXYMETHYL-AMINOMETHANE	NH2C(CH2OH)3	77-86-1	1910 POISON	CAB 6-1	88500 GR	50 GR	
464	TRIS HYDROXYKETYL-AMINOMETHANE	NH2C(CH2OH)3	77-86-1	1910 POISON	CAB 11-3	28500 GR	1000 GR	
453	TRIS HYDROXYMETHYL-AMINOMETHANE	NH2C(CH2OH)3	77-86-1	1910 POISON	DESC 1	18100 GR	100 GR	
1341	TRIS HYDROXYMETHYL-AMINOMETHANE	NH2C(CH2OH)3	77-86-1	1910 POISON	CAB 13-4	4850 GR	200 GR	
759	TF15-2-HYDROXYACETOPHENONE CHROMIUM				CAB 7-4	1810 GR	90 GR	
948	TRITON X-101			12502 CORROSIVE	CAB 22-6	18375 ML	5875 ML	
812	TUNGSTEN	N	7487-37-2	CORROSIVE	7% HNO3/4% HF	CAB 23-3	2850 ML	100 ML
751	TUNGSTEN METAL	N	7440-33-7			CAB 7-4	24100 GR	200 GR
1159	TUNGSTEN OXIDE	WO3x20				CAB 36 ARCHIVE	1810 GR	10 GR
742	TUNGSTEN WIRE	N	7440-33-7			CAB 7-3	18127 GR	123 GR
352	ULTRASTIC ACID	H2KO4	7783-03-1	3362	CAB 6-2	18500 GR	500 GR	
353	UREA	NH2CONH2	57-13-6	1733	CAB 36 ARCHIVE	18500 GR	500 GR	
535	USED RESIN	AG-20H-14			A2	282 LB	4LB1006616	
970	VANADATE REAGENT					CAB 37 ARCHIVE	18300 ML	500 ML
1283	VANADIUM LIVI SULFATE OXIDE	VOSO4				CAB 6-2	58250 GR	1250 GR
355	VANADIUM FENT OXIDE	V2O5	1314-62-1	1775 POISON		CAB 36 ARCHIVE	18100 GR	100 GR
471	VANADYL SULFATE	VOSO4-2H2O	27771-13-6	2262	CAB 11-1	18100 GR	100 GR	
466	VANADYL SULFATE 2-HYDRATE	VOSO4-2H2O	27771-13-6	2262	CAB 6-2	312100 GR	3100 GR	
1375	VERSENE					3XCH TOP BY DENSITY XETER	186000 ML	8300 ML
1061	VIRCO-PET-20					CAB 37-6	18125 ML	125 ML
849	VISCOSE STD					CAB 22-1	78500 ML	4200 ML
11	WASTE					HD 4	184 LITER	4 LITER
12	WASTE					HD 4	184 LITER	4 LITER
13	WASTE					HD 2	184 LITER	4 LITER
14	WASTE					HD 2	184 LITER	4 LITER
15	WASTE					HD 2	184 LITER	4 LITER
16	WASTE					HD 2	184 LITER	4 LITER
17	WASTE					CAB 25-1	184 LITER	4 LITER
55	WASTE	NHO3/HCL				CAB 25-1	184 LITER	4 LITER
56	WASTE	NHO3/HCL				CAB 25-1	184 LITER	4 LITER
57	WASTE	NHO3/HCL				CAB 25-1	184 LITER	4 LITER
58	WASTE	DENSITY AD				CAB 25-1	184 LITER	4 LITER
59	WASTE	NHO3/HCL				CAB 25-1	184 LITER	4 LITER
60	WASTE	NaOH				CAB 25-1	184 LITER	4 LITER
61	WASTE	NaOH				CAB 25-1	184 LITER	4 LITER
62	WASTE	ALCOHOL				CAB 25-1	184 LITER	4 LITER

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 34 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	HSGS & CLASSIFICATION	C P MATRIX	LOCATION	UNITS/SIZE	TOTAL
43	WASTE					CAB 25-1	100 LITER	4 LITER
44	WASTE					CAB 25-1	100 LITER	4 LITER
45	WASTE					CAB 25-1	100 LITER	4 LITER
46	WASTE					CAB 25-1	100 LITER	4 LITER
47	WASTE					CAB 25-2	100 LITER	4 LITER
48	WASTE					CAB 25-2	100 LITER	4 LITER
49	WASTE					CAB 25-2	100 LITER	4 LITER
50	WASTE					CAB 25-2	100 LITER	4 LITER
51	WASTE					CAB 25-2	100 LITER	4 LITER
52	WASTE					CAB 25-2	100 LITER	4 LITER
53	WASTE					CAB 25-2	100 LITER	4 LITER
54	WASTE					CAB 25-2	100 LITER	4 LITER
55	WASTE					CAB 25-2	100 LITER	4 LITER
56	WASTE					CAB 25-2	100 LITER	4 LITER
57	WASTE					CAB 25-2	100 LITER	4 LITER
58	WASTE					CAB 25-2	100 LITER	4 LITER
59	WASTE					CAB 25-2	100 LITER	4 LITER
60	WASTE					CAB 25-3	100 LITER	4 LITER
61	WASTE					CAB 25-3	100 LITER	4 LITER
62	WASTE					CAB 25-3	100 LITER	4 LITER
63	WASTE					CAB 25-3	100 LITER	4 LITER
64	WASTE					CAB 25-3	100 LITER	4 LITER
65	WASTE					CAB 25-3	100 LITER	4 LITER
66	WASTE					CAB 25-3	100 LITER	4 LITER
67	WASTE					CAB 25-3	100 LITER	4 LITER
68	WASTE					CAB 25-3	100 LITER	4 LITER
69	WASTE					CAB 25-3	100 LITER	4 LITER
70	WASTE					CAB 25-3	100 LITER	4 LITER
71	WASTE					CAB 25-3	100 LITER	4 LITER
72	WASTE					CAB 25-3	100 LITER	4 LITER
73	WASTE					CAB 25-3	100 LITER	4 LITER
74	WASTE					CAB 25-3	100 LITER	4 LITER
75	WASTE					CAB 25-3	100 LITER	4 LITER
76	WASTE					CAB 25-3	100 LITER	4 LITER
77	WASTE					CAB 25-3	100 LITER	4 LITER
78	WASTE					CAB 25-3	100 LITER	4 LITER
79	WASTE					CAB 25-3	100 LITER	4 LITER
80	WASTE					CAB 25-3	100 LITER	4 LITER
81	WASTE					CAB 25-3	100 LITER	4 LITER
82	WASTE					HD 2	100 LITER	1 LITER
83	WASTE					HD 3	10000 ML	500 ML
84	WASTE					HD 1	781 GAL	7 GALLONS
1540	WASTE ALSA-6073							
1541	WASTE ALSA-0073							
1545	WASTE ALSA-0010					CAB 25-1	10 CONTAINERS AMOUNT UNKNOWN	7777777
1547	WASTE ALSA-0091					BINCH TOP BY DENSITY METER	100 LITER	1 LITER
1570	WASTE ALSA-0019					CAB 25-3	300 LITER	12 LITER
1558	WASTE ALSA-0104					BINCH TOP BY DENSITY METER	100 LITER	3 LITER
1557	WASTE ALSA-0105					ORGANIC BINCH TOP	100 GAL.	1 GAL.
1558	WASTE ALSA-0106					ORGANIC BINCH TOP	100 GAL.	1 GAL.
1559	WASTE ALSA-0108					ORGANIC BINCH TOP	100 GAL.	1 GAL.
1555	WASTE ALSA-0107					ORGANIC BINCH TOP	100 GAL.	1 GAL.
609	WASTE ALSA-59					HD 1	100 GAL.	1 GALLON
1551	WASTE HAZARDOUS ICP STANDARD					CAB 25-1	30000 ML	1500 ML
1553	WASTE HAZARDOUS KCN	KCN				CAB 25-1	10250 ML	250 ML
301	WASTE IRONHIDE					HD 2	10100 ML	160 ML
916	WASTE TYLENOL ORANGE					HD 2	10250 ML	250 ML
917	WASTE IR SPADIS					HD 2	10250 ML	250 ML
515	NESSON OIL (VEGI)					KITCHEN CABINET	10240 ML	24 QT.
516	WOOL WAT					WOMENS BATHROOM	10200 ML	4 QT.
517	TYLENE	C ₆ H ₁₁ (CH ₃) ₂	1330-20-7	1512	FLAMMABLE	CAB 25-2	500 LITER	20 LITER
450	TYLENE	C ₆ H ₁₁ (CH ₃) ₂	1330-20-7	1512	FLAMMABLE	CAB 19-4	100 LITER	4 LITER
583	TYLENE	1CH ₃ 2CH ₃ 2O	524-75-9		Poison	CAB 15	1000 ML	50 ML
1244	TYLENE ORANGE	C ₃ H ₈ Cl ₂ O ₂ I ₂ S	1611-35-1			CAB 13-3	9000 ML	90 ML
472	TYLOL					CAB 20-3	781 GAL	2 GALLONS
919	YTTERBIUM	Yb				CAB 22-4	20500 ML	1000 ML
1501	YTTERBIUM CHLORIDE	YbCl ₃ ·6H ₂ O	10341-91-0			75	10100 GM	10 GM
1502	YTTERBIUM NITRATE	Yb(NO ₃) ₃ ·6H ₂ O	35725-31-9		OXIDIZER	75	10100 GM	10 GM
1473	YTTERBIUM OXIDE	Yb ₂ O ₃	10203	1314-37-0		74	10100 KG	100 KG
1503	YTTERBIUM OXIDE	Yb ₂ O ₃	Yb2O ₃	1314-37-0		75	105 GM	5 GM
231	YTTRIUM	Y	7147-01-0		CORROSIVE	101 KGL	2850 ML	100 ML
912	YTTRIUM	Y			CORROSIVE	21 KHGS	28500 ML	1000 ML
468	YTTRIUM NITRATE	Yb(HO ₃) ₃ ·3H ₂ O	13401-10-9	2155	OXIDIZER	CAB 12-3	20500 GM	100 GM

9 1 1 5 1 7 7 0

WHC-EP-0342 Addendum 13 08/31/90
222-S Laboratory Wastewater

Table A-4. 222-SA Chemical Inventory by Common Name. (sheet 35 of 35)

REC.	COMMON NAME	FORMULA	CAS NUMBER	MSDS #	CLASSIFICATION	C	P	MATRIX	LOCATION	UNITS/SITE	TOTAL
1504	ZYTTRIUM NITRATE	Y2(NO3)3	13194-98-9	2135	OXIDIZER				75	1625 GM	35 GM
924	ZYTTRIUM OXIDE	Z2O3	1314-34-9	1579					CAB 36 ARCHIVE	161 GM	1 GM
1460	ZYTTRIUM OXIDE	Z2O3	1314-34-9	1579					75	165 GM / 162 GM	7 GM
1505	ZYTTRIUM OXIDE	Z2O3	1314-34-9	1579					1625 GM/1610 GM/20250GM/11850GM	615 GM	
441	ZAPON THINNER								75	161 LITER	1 LITER
719	ZINC	ZN							CAB 37 ARCHIVE	68100 ML	600 ML
813	ZINC	ZN		7647-01-0	CORROSIVE			101 HNO3	75	2850 ML	100 ML
863	ZINC	ZN			CORROSIVE			21 HNO3	CAB 23-1	28500 ML	1000 ML
879	ZINC	ZN			CORROSIVE			21 HNO3	CAB 22-2	18500 ML	500 ML
1573	ZINC	ZN							CAB 23-3	1850 ML	50 ML
1134	ZINC ACETATE	(CH3COO)2Zn·2H2O	5970-15-6	2409					CAB 24-2	16250 ML	250 ML
39	ZINC CHLORIDE	ZNCl2	7618-95-7	1660	POISON				HO 1	11850 ML	500 ML
219	ZINC CHLORIDE	ZNCl2	7646-95-2	1660	POISON				CAB 6-1	782500 GM	17500 GM
356	ZINC CHLORIDE	ZNCl2	7647-95-7	1660	POISON				CAB 6-2	78500 GM	3500 GM
1670	ZINC CHLORIDE	ZNCl2	7648-95-7	1660	POISON				CAB 36 ARCHIVE	28500 GM	1000 GM
1365	ZINC CHLORIDE STOCK SOLN	ZNCl2	7648-95-7	1660	POISON				152	1850 ML / 483.5 LITER	14 L/50 NL
733	ZINC CLEANED	ZN		7410-61-6	2315				CAB 7-3	18.5 GM / 2810 GM	20.5 GM
1275	ZINC DIETHYL								CAB 13-3	381 GM	3 GM
735	ZINC GRANULAR	ZN		7410-61-6	2315				CAB 7-3	18500 GM / 38451 GM / 18615.7 GM	2527.7 GM
736	ZINC METAL MOSSY	ZN		7410-61-6	2315				CAB 7-3	18351 GM	154 GM
662	ZINC OXIDE	ZN2O3	1314-13-2	2358					CAB 36 ARCHIVE	181 GM	1 GM
738	ZINC POWDER	ZN		7410-61-6	2315				CAB 7-3	18351.6 GM	453.6 GM
739	ZINC SHOT LEAD CROP	ZN		7410-61-6	2315				CAB 7-3	48100 GM	400 GM
357	ZINC SULFATE	ZNSO4·7H2O	7416-20-9	1368	POISON				CAB 6-2	18500 GM	500 GM
415	ZINC SULFATE	ZNSO4·7H2O	7416-20-9	1664	POISON				CAB 11-3	18500 GM	500 GM
1671	ZINC SULFATE	ZNSO4·7H2O	7416-20-9	1668	POISON				CAB 36 ARCHIVE	18500 GM	500 GM
745	ZIRCALOY METAL								CAB 7-4	1810 GM	10 GM
801	ZIRCONIUM	ZR		7097-37-2	CORROSIVE			101 HNO3/21 HF	CAB 23-3	2850 ML	100 ML
913	ZIRCONIUM	ZR			CORROSIVE			101 HNO3	CAB 22-1	31800 ML	1500 ML
1650	ZIRCONIUM	ZR			CORROSIVE			101 HNO3	CAB 27-1	18500 ML	500 ML
1651	ZIRCONIUM	ZR			CORROSIVE			101 HNO3	CAB 27-4	18500 ML	500 ML
1659	ZIRCONIUM	ZR			CORROSIVE			101 HNO3	CAB 37 ARCHIVE	18500 ML	500 ML
1163	ZIRCONIUM	ZR			CORROSIVE			51 HF	CAB 27-4	18500 ML	500 ML
350	ZIRCONIUM DINITRATE OXIDE	ZrO(NO3)2·H2O	1401HNO312-H2O	14925-18-3	OXIDIZER				CAB 36 ARCHIVE	18100 GM	100 GM
469	ZIRCONIUM FLUORIDE	ZrF4		2703-61-1	3317	CORROSIVE			CAB 11-3	18250 GM	250 GM
1507	ZIRCONIUM FLUORIDE	ZrF4		2703-61-1	3317	CORROSIVE			CAB 12-5	18250 GM	250 GM
716	ZIRCONIUM METAL	ZR		7440-17-7	1747	FLAMMABLE			CAB 7-4	1810 GM	10 GM
359	ZIRCONIUM NITRATE	Zr(HNO3)4		12372-57-3	3048	CORROSIVE OXIDIZER			CAB 6-2	51160 GM	500 GM
1410	ZIRCONIUM NITRATE	Zr(HNO3)4·5H2O		13221-61-9	1604	OXIDIZER			CAB 34-5	48100 ML	400 ML
470	ZIRCONIUM OXIDE	ZrO2		1314-23-1	2324				CAB 11-3	181000 GM	1000 GM
911	ZIRCONIUM OXIDE	ZrO2		1314-23-1	2324				DESC 3	18100 GM	100 GM
467	ZIRCONIUM OXYCHLORIDE	ZrOCl2·4H2O	15161-27-5	2974	CORROSIVE				CAB 11-3	18500 GM	500 GM
741	ZIRCONIUM POWDER	ZR		7410-17-7	1747	FLAMMABLE			CAB 7-3	28100 GM	200 GM
1508	ZIRCONIUM SULFATE TETRAHYDRATE	Zr(SO4)2·4H2O	14631-61-2	2151					CAB 12-5	2125 GM	50 GM
914	ZIRCONIUM TETRAFLUORIDE	ZrF4							DESC 3	1850 GM	50 GM
349	ZIRCONIUM NITRATE	ZrO(HNO3)2·4H2O	1401HNO312-H2O	13826-11-9	1604	OXIDIZER			CAB 36 ARCHIVE	38125 GM / 18100 GM / 1850 GM	400 GM
468	ZIRCONIUM NITRATE	ZrO(HNO3)2·4H2O	1401HNO312-H2O	13821-61-9	1604	OXIDIZER			CAB 11-3	18500 GM	500 GM
1012	ZIRCONIUM NITRATE	ZrO3		13821-61-9	1604	OXIDIZER			DESC 5	1625 GM	25 GM

Table A-5. Maintenance Area Chemical Inventory. (sheet 1 of 3)

Trade Name	Components
Aerokroil	None given
Aero-Duster	Compressed Gas
Aluminum Cutting Fluid	None given
Anchorlube	None given
Anti Static Spray	Isobutane
Anti-Seize Compound	Nichel
Anti-Static Spray	Hexane
Belt Dressing	Petroleum Distillate
Blue Layout Fluid	Toluol
Circuit Board Cleaner	Fluorinated Hydrocarbons, Isopropanol, Chlorinated Hydrocarbons
Contact Cement	Acetone, Tulane (SIC Toluene?), Petroleum
Cutting Oil	Distillate Sulphur-Lard
Dry Graphite Lubricant	Graphite
Electra Clean	Petroleum Solvents
Elect. Contact Cleaner	petroleum Distillates
Elect. Contact Cleaner	Perchloroethylene
Flux Remover	Azeotrope of Freon, Methylene Chloride
Freeze Mist	Chlorofluorocarbons
Freon Solvent	Freon TF & 6% Methane
Gasket Adhesive	Petroleum, Acetone
Glass & Metal	None given
Head-Disk Cleaner	Freon, Isopropyl Alcohol
Head-Disk Cleaner	Anhydrous Isopropanol

Table A-5. Maintenance Area Chemical Inventory. (sheet 2 of 3)

Trade Name	Components
Indicating Liquid Blue	Synthetic Oils
Indicating Liquid Red	Acetylene Tetrabromide
Insulating Paint (red)	Aliphatic Hydrocarbon, Modified Rosin, Brown Ferric Oxide Silica, Silicates, Aromatic Hydrocarbon, Soya Alkyd Resin
IVI Spray Cleaner	Toluene, Xylene
Lint-Dust Remover	None given
Magnetic Head Cleaner	Trichlorotrifluoroethane
Metal Magic	None given
Oven Cleaner	Sodium Hydroxide
Penetrating Oil	Petroleum Distillates
Plastic Coating	Trichloromethane, Toluene, Methylene Chloride
Quick Freeze	Freon
Red Insulating Varnish	Xylene
Refrigerant 12	Dichlorodifluoromethane
RTV	Silicone Rubber
Rust Remover	Phosphates
S^@^@ling Compound	Combustible Mixture
Slide Wire Cleaner	Fluorinated Hydrocarbons
Slip Plate	Graphite Base
Spotcheck	Ethyl Acetate, Surface Active Agent, Petroleum, Distillates
Spray Adhesive	Propellant, Cyclohexane, Hexane
Spray Paint	Methylisobutyl Ketone, Toluene
Stainless Steel Polish	None given
Tap Tool	None given
Tape Head Cleaner	Trichloroethylene
TMC Cleaner	None given

Table A-5. Maintenance Area Chemical Inventory. (sheet 3 of 3)

Trade Name	Components
Weld On, P-70	Dimethylformamide, cyclohexanone, Methyl Ethyl Ketone, Tetrahydrofuran
Weld On, 3	Chlorinated Solvents
Weld On, 771	Dimethylformamide, Tetrahydrofuran
Caulk, Fire Barrier	Xylene, Methyl Ethyl Ketone
WD-40	--

Table A-6. 222-S/222-SA Janitorial Supplies and Aerosols. (sheet 1 of 4)

Product Name
A-Klean
Ajax Cleanser
Alconox Detergent
Ascarite II
Bon-Ami
Brasso
Brite Boy Metal Polish
Chlorox
D-CON Rat and Mouse Killer
Decker's Pink Creme
Desenex
Evans Anti Static Spray
Fantastic
Formula 409
Glass Plus
GSI 112
Invisible Glove
Jergens Aloe and Lanolin
Johnson's Baby Powder
Karmi Industries Emulsion Bosi Cleaner
Lava Soap
Monostat "Chromerge"
Mop Oil
OV-N-EZ Oven Cleaner
Palmolive Detergent
Parade Bleach
Petroleum Jelly
RMC Cleaner
Rustex Rust Remover
Sanikleen Heavy Duty Cleaner Disinfectant
Seven Rivers Industrial Strength Hand Creme
SOS Pads
Spic-n-Span
Spray-n-Wipe
Sweet Heart Dishwashing Liquid
Task Master Lemon Wax Furniture Polish
Krylon Silicon Lube
Tide
Triple C
Windex
Wood Plus
Wool Wax Creme
Wool Wax Creme

Table A-6. 222-S/222-SA Janitorial Supplies and Aerosols. (sheet 2 of 4)

Aerosols
Aero-Duster MS-220
Ajax Window Cleaner
Americaine Topical Anesthetic Spray
12% Benzoncaine & Freon
Blue Layout Fluid
Behold Cleaning Polish
Bravo - Power Foam
Buehler Metadi Aerosol Spray Diamond Compound
3 C's Crystal Clear Cleaner Spray
Cardinal Industrial Finishes (Paint)
Carnauba Wax Furniture Polish
Chemscape Foaming Oven Cleaner
Cleaner for Plastic-Glass-Metal MS-260
CRC Gasket Remover No. 05021
Crown Tap Tool No. 9106
Dry Graphite Lubricant No. 76210
Dust Off
Easy Off Oven Cleaner
Electra Clean No. 02018
Endust
Evergreen Room Deodorizer
First Class Lemon Furniture Polish
Flair Wood and Multipurpose Polish w/Lemon Oil
Flash Foaming Cleaner
Flo-Kem Kleen-It Cleaner
Foaming Glass and Mirror Cleaner
Four way Furniture Polish Creamy Wax Base w/Lemon Oil
Freeze Mist
Freon TF Solvent Cleaner
Freon Solvent MS-165
Glo SS Stainless Steel Polish & Cleaner
Glycol Air Sanitizer Mint Fragrance
Good Sense Air Freshener
Graffiti Remover
Head and Disc Cleaner TX-109
Insulating Paint 1201 Red Enamel
Isis Room Deodorant
Johnson's Starting Fluid Part No. 6752
Johnson Shine Up
Kano Aerokroil

Table A-6. 222-S/222-SA Janitorial Supplies and Aerosols. (sheet 3 of 4)

Aerosols
Krylon Paints
Crystal Clear
Ignition Sealer
All Purpose Silicone Spray
Belt Dressing
Spray Primer
Bright Silver
Glossy White
Flat White
Antique White
Glossy Black
Charcoal Gray
Chrome Yellow
Baby Glue
Moss Green
Cherry Red
Mandarin Orange
Glowing Orange-Red
Greaseless Lubricant No. 00116
Lysol Brand Spray Disinfectant
Mint No. 403 Air Freshener and Deodorant
Misco Clean Room Head and Disk Cleaner No. 1330
Misty Bayberry Air Freshener
Misty Dualcide Insecticide
Misty Furniture Polish
Misty Glass and Mirror Cleaner
Misty Oven and Grill Cleaner
Omit Plus Lint and Dust Remover
OV-N-Ez Oven Cleaner No. 23
Pam Vegetable Cooking Spray
Poly-Cleaner & Wax Spray Furniture Polish
Rad Con Surface Cleaner
Raid Flying Insect Killer Formula II
Red Insulating Varnish No. 6084
Refrigerant 12 Dichlorodifluoromethane
Rust-Oleum Fast Dry Hard Industrial Coating
No. 2185
Scotch
Grip 871-NF Spray Adhesive
IVI Spray Sealer No. 1602
Super 77 Spray Adhesive
Tape Primer

Table A-6. 222-S/222-SA Janitorial Supplies and Aerosols. (sheet 4 of 4)

Aerosols
Slip Plate Cleaner
Source Freon Solvent Cleaner No. 8095
Spice No. 401 Air Freshener
SPI Duster
Magnaflux
Spot Check Penetrant SKL-HF/SKL-S
Spot Check Penetrant SKD-S
Spot Check Penetrant SKC-S
SPRA Solvo Penetrating Oil Sprayton TF Electric Contact & Tape Head Cleaner NO.2002
Spraytec Brand Anti-Static Spray No. 32N1079
Static Guard No. 1-697-14-06
Swish Aerosol Elektrokleen
Taskmaster Bayberry Air Freshener
Taskmaster Inset Killer
Terand Concentrated Furniture Polish w/Creamy Lemon Wax
Terand Inset Killer
IMC Cleaner No. 2009
Triple Brand SSS Glass Cleaner
Triple Brand SSS Lemon Oil Furniture Polish
VWR Dist Cleaner Dichlorodifluoromethane
WD-40 West Pine Spray Cleaner
Windex Glass Cleaner
Wissh Electronic Contact Cleaner and Lubricant Model 36-037
Zenith Circuit Board Cleaner No. 929-152
Zenith Super Freeze No. 929-121
ZEP Meter Mist Insect Killer

This page intentionally left blank.

APPENDIX B
SAMPLE DATA

This page intentionally left blank.

Table B-1. Chemical Raw Data.
 (sheet 1 of 8)

Constituent	Sample #	Date	Method	Result
Arsenic (EP Toxic)	50804E	11/28/89	ICP	<5.00E+02
Arsenic (EP Toxic)	50661E	10/09/89	ICP	<5.00E+02
Arsenic (EP Toxic)	50673E	10/11/89	ICP	<5.00E+02
Arsenic (EP Toxic)	51079E	3/21/90	ICP	<5.00E+02
Barium	50804	11/28/89	ICP	2.50E+01
Barium	50661	10/09/89	ICP	3.30E+01
Barium	50673	10/11/89	ICP	3.00E+01
Barium	51079	3/21/90	ICP	2.50E+01
Barium (EP Toxic)	50804E	11/28/89	ICP	<1.00E+03
Barium (EP Toxic)	50661E	10/09/89	ICP	<1.00E+03
Barium (EP Toxic)	50673E	10/11/89	ICP	<1.00E+03
Barium (EP Toxic)	51079E	3/21/90	ICP	<1.00E+03
Boron	50804	11/28/89	ICP	<1.00E+01
Boron	50661	10/09/89	ICP	1.70E+01
Boron	50673	10/11/89	ICP	1.60E+01
Boron	51079	3/21/90	ICP	2.30E+01
Cadmium (EP Toxic)	50804E	11/28/89	ICP	<1.00E+02
Cadmium (EP Toxic)	50661E	10/09/89	ICP	<1.00E+02
Cadmium (EP Toxic)	50673E	10/11/89	ICP	<1.00E+02
Cadmium (EP Toxic)	51079E	3/21/90	ICP	<1.00E+02
Calcium	50804	11/28/89	ICP	1.55E+04
Calcium	50661	10/09/89	ICP	1.90E+04
Calcium	50673	10/11/89	ICP	1.76E+04
Calcium	51079	3/21/90	ICP	1.57E+04
Chloride	50804	11/28/89	IC	2.30E+03
Chloride	50661	10/09/89	IC	5.20E+03
Chloride	50673	10/11/89	IC	5.10E+03
Chloride	51079	3/21/90	IC	2.20E+03
Chromium (EP Toxic)	50804E	11/28/89	ICP	<5.00E+02
Chromium (EP Toxic)	50661E	10/09/89	ICP	<5.00E+02
Chromium (EP Toxic)	50673E	10/11/89	ICP	<5.00E+02
Chromium (EP Toxic)	51079E	3/21/90	ICP	<5.00E+02
Copper	50804	11/28/89	ICP	2.47E+02
Copper	50661	10/09/89	ICP	9.20E+01
Copper	50673	10/11/89	ICP	1.05E+02
Copper	51079	3/21/90	ICP	1.65E+02
Fluoride	50804	11/28/89	IC	<5.00E+02
Fluoride	50804	11/28/89	ISE	1.19E+02
Fluoride	50661	10/09/89	IC	<5.00E+02
Fluoride	50661	10/09/89	ISE	1.42E+02
Fluoride	50673	10/11/89	IC	<5.00E+02
Fluoride	50673	10/11/89	ISE	1.35E+02
Fluoride	51079	3/21/90	IC	<5.00E+02
Fluoride	51079	3/21/90	ISE	1.04E+02
Iron	50804	11/28/89	ICP	4.50E+01
Iron	50661	10/09/89	ICP	1.10E+02

Table B-1. Chemical Raw Data. (sheet 2 of 32)
 13.7. Data for 222-S Laboratory Wastewater.
 (sheet 2 of 8)

Constituent	Sample #	Date	Method	Result
Iron	50673	10/11/89	ICP	2.25E+02
Iron	51079	3/21/90	ICP	1.25E+02
Lead (EP Toxic)	50804E	11/28/89	ICP	<5.00E+02
Lead (EP Toxic)	50661E	10/09/89	ICP	<5.00E+02
Lead (EP Toxic)	50673E	10/11/89	ICP	<5.00E+02
Lead (EP Toxic)	51079E	3/21/90	ICP	<5.00E+02
Magnesium	50804	11/28/89	ICP	3.53E+03
Magnesium	50661	10/09/89	ICP	4.35E+03
Magnesium	50673	10/11/89	ICP	4.07E+03
Magnesium	51079	3/21/90	ICP	3.83E+03
Manganese	50804	11/28/89	ICP	<5.00E+00
Manganese	50661	10/09/89	ICP	1.00E+01
Manganese	50673	10/11/89	ICP	9.00E+00
Manganese	51079	3/21/90	ICP	<5.00E+00
Mercury (EP Toxic)	50804E	11/28/89	CVAA/M	<2.00E+01
Mercury (EP Toxic)	50661E	10/09/89	CVAA/M	<2.00E+01
Mercury (EP Toxic)	50673E	10/11/89	CVAA/M	<2.00E+01
Mercury (EP Toxic)	51079E	3/21/90	CVAA/M	<2.00E+01
Nitrate	50804	11/28/89	IC	<5.00E+02
Nitrate	50661	10/09/89	IC	<5.00E+02
Nitrate	50673	10/11/89	IC	<5.00E+02
Nitrate	51079	3/21/90	IC	8.00E+02
Potassium	50804	11/28/89	ICP	6.93E+02
Potassium	50661	10/09/89	ICP	8.56E+02
Potassium	50673	10/11/89	ICP	8.43E+02
Potassium	51079	3/21/90	ICP	6.64E+02
Selenium (EP Toxic)	50804E	11/28/89	ICP	<5.00E+02
Selenium (EP Toxic)	50661E	10/09/89	ICP	<5.00E+02
Selenium (EP Toxic)	50673E	10/11/89	ICP	<5.00E+02
Selenium (EP Toxic)	51079E	3/21/90	ICP	<5.00E+02
Silicon	50804	11/28/89	ICP	1.94E+03
Silicon	50661	10/09/89	ICP	2.05E+03
Silicon	50673	10/11/89	ICP	2.06E+03
Silicon	51079	3/21/90	ICP	1.74E+03
Silver (EP Toxic)	50804E	11/28/89	ICP	<5.00E+02
Silver (EP Toxic)	50661E	10/09/89	ICP	<5.00E+02
Silver (EP Toxic)	50673E	10/11/89	ICP	<5.00E+02
Silver (EP Toxic)	51079E	3/21/90	ICP	<5.00E+02
Sodium	50804	11/28/89	ICP	1.82E+03
Sodium	50661	10/09/89	ICP	2.55E+03
Sodium	50673	10/11/89	ICP	2.32E+03
Sodium	51079	3/21/90	ICP	1.83E+03
Strontium	50804	11/28/89	ICP	7.80E+01
Strontium	50661	10/09/89	ICP	1.07E+02
Strontium	50673	10/11/89	ICP	9.80E+01

WHC-EP-0342 Addendum 13 08/31/90
 222-S Laboratory Wastewater

Table B-1. Chemical Raw Data.
 (sheet 3 of 8)

Constituent	Sample #	Date	Method	Result
Strontium	51079	3/21/90	ICP	8.30E+01
Sulfate	50804	11/28/89	IC	1.06E+04
Sulfate	50661	10/09/89	IC	1.48E+04
Sulfate	50673	10/11/89	IC	1.49E+04
Sulfate	51079	3/21/90	IC	1.20E+04
Uranium	50804	11/28/89	FLUOR	3.46E-01
Uranium	50661	10/09/89	FLUOR	9.58E-01
Uranium	50673	10/11/89	FLUOR	4.81E-01
Uranium	51079	3/21/90	FLUOR	3.11E-01
Vanadium	50804	11/28/89	ICP	<5.00E+00
Vanadium	50661	10/09/89	ICP	7.00E+00
Vanadium	50673	10/11/89	ICP	<5.00E+00
Vanadium	51079	3/21/90	ICP	<5.00E+00
Zinc	50804	11/28/89	ICP	<5.00E+00
Zinc	50661	10/09/89	ICP	1.80E+01
Zinc	50673	10/11/89	ICP	2.30E+01
Zinc	51079	3/21/90	ICP	1.50E+01
Acetone	50804	11/28/89	VOA	1.40E+01
Acetone	50804	11/28/89	ABN	<1.00E+01
Acetone	50804B	11/28/89	VOA	<1.00E+01
Acetone	50804T	11/28/89	VOA	<1.00E+01
Acetone	50661	10/09/89	VOA	<1.00E+01
Acetone	50661	10/09/89	ABN	<1.00E+01
Acetone	50661B	10/09/89	VOA	<1.00E+01
Acetone	50661T	10/09/89	VOA	<1.00E+01
Acetone	50673	10/11/89	VOA	<1.00E+01
Acetone	50673	10/11/89	ABN	<1.00E+01
Acetone	50673B	10/11/89	VOA	<8.00E+00
Acetone	50673T	10/11/89	VOA	<1.00E+01
Acetone	51079	3/21/90	VOA	<7.00E+00
Acetone	51079	3/21/90	ABN	<1.00E+01
Acetone	51079B	3/21/90	VOA	<1.00E+01
Acetone	51079T	3/21/90	VOA	<1.00E+01
Ammonia	50804	11/28/89	ISE	<5.00E+01
Ammonia	50661	10/09/89	ISE	9.10E+01
Ammonia	50673	10/11/89	ISE	7.80E+01
Ammonia	51079	3/21/90	ISE	<5.00E+01
Dichloromethane	50804	11/28/89	VOA	<5.00E+00
Dichloromethane	50804B	11/28/89	VOA	7.00E+00
Dichloromethane	50804T	11/28/89	VOA	6.00E+00
Dichloromethane	50661	10/09/89	VOA	<5.00E+00
Dichloromethane	50661B	10/09/89	VOA	6.00E+02
Dichloromethane	50661T	10/09/89	VOA	6.30E+02
Dichloromethane	50673	10/11/89	VOA	<5.00E+00
Dichloromethane	50673B	10/11/89	VOA	4.70E+02
Dichloromethane	50673T	10/11/89	VOA	4.90E+02

Table B-1. Chemical Raw Data.
 (sheet 4 of 8)

Constituent	Sample #	Date	Method	Result
Dichloromethane	51079	3/21/90	VOA	<5.00E+00
Dichloromethane	51079B	3/21/90	VOA	<5.00E+00
Dichloromethane	51079T	3/21/90	VOA	<5.00E+00
Tetrahydrofuran	50804	11/28/89	VOA	<1.00E+01
Tetrahydrofuran	50804B	11/28/89	VOA	<6.00E+00
Tetrahydrofuran	50804T	11/28/89	VOA	<5.00E+00
Tetrahydrofuran	50661	10/09/89	VOA	<1.00E+01
Tetrahydrofuran	50661B	10/09/89	VOA	<1.00E+01
Tetrahydrofuran	50661T	10/09/89	VOA	<1.00E+01
Tetrahydrofuran	50673	10/11/89	VOA	<1.00E+01
Tetrahydrofuran	50673B	10/11/89	VOA	<1.00E+01
Tetrahydrofuran	50673T	10/11/89	VOA	<1.00E+01
Tetrahydrofuran	51079	3/21/90	VOA	<1.00E+01
Tetrahydrofuran	51079B	3/21/90	VOA	1.00E+01
Tetrahydrofuran	51079T	3/21/90	VOA	1.00E+01
Trichloromethane	50804	11/28/89	VOA	2.10E+01
Trichloromethane	50804B	11/28/89	VOA	1.00E+01
Trichloromethane	50804T	11/28/89	VOA	9.00E+00
Trichloromethane	50661	10/09/89	VOA	2.50E+01
Trichloromethane	50661B	10/09/89	VOA	<5.00E+00
Trichloromethane	50661T	10/09/89	VOA	<5.00E+00
Trichloromethane	50673	10/11/89	VOA	2.00E+01
Trichloromethane	50673B	10/11/89	VOA	<5.00E+00
Trichloromethane	50673T	10/11/89	VOA	<5.00E+00
Trichloromethane	51079	3/21/90	VOA	1.30E+01
Trichloromethane	51079B	3/21/90	VOA	<4.00E+00
Trichloromethane	51079T	3/21/90	VOA	<4.00E+00
Unknown amide	50804	11/28/89	ABN	2.60E+01
Alkalinity (Method B)	50804	11/28/89	TITRA	4.40E+04
Alkalinity (Method B)	50661	10/09/89	TITRA	4.70E+04
Alkalinity (Method B)	50673	10/11/89	TITRA	5.30E+04
Alkalinity (Method B)	51079	3/21/90	TITRA	4.60E+04
Alpha Activity (pCi/L)	50804	11/28/89	Alpha	7.78E-01
Alpha Activity (pCi/L)	50661	10/09/89	Alpha	5.88E+00
Alpha Activity (pCi/L)	50673	10/11/89	Alpha	1.06E+00
Alpha Activity (pCi/L)	51079	3/21/90	Alpha	<2.89E-01
Beta Activity (pCi/L)	50804	11/28/89	Beta	<1.04E+00
Beta Activity (pCi/L)	50661	10/09/89	Beta	5.00E+00
Beta Activity (pCi/L)	50673	10/11/89	Beta	<4.72E-01
Beta Activity (pCi/L)	51079	3/21/90	Beta	3.88E+00
Conductivity (μ S)	50804	11/28/89	COND-F1	1.33E+02
Conductivity (μ S)	50661	10/09/89	COND-F1	5.46E+02
Conductivity (μ S)	50673	10/11/89	COND-F1	1.37E+02
Conductivity (μ S)	51079	3/21/90	COND-F1	1.37E+02
Ignitability (°F)	50804E	11/28/89	IGNIT	2.12E+02
Ingitability (°F)	50661E	10/09/89	IGNIT	2.10E+02

Table B-1. Chemical Raw Data.
 (sheet 5 of 8)

Constituent	Sample #	Date	Method	Result
Ingitability (°F)	50673E	10/11/89	IGNIT	2.10E+02
Ingitability (°F)	51079E	3/21/90	IGNIT	2.06E+02
pH (dimensionless)	50804	11/28/89	PH-F1d	7.19E+00
pH (dimensionless)	50661	10/09/89	PH-F1d	6.73E+00
pH (dimensionless)	50673	10/11/89	PH-F1d	6.60E+00
pH (dimensionless)	51079	3/21/90	PH-F1d	7.34E+00
Reactivity Cyanide (mg/kg)	50804E	11/28/89	DSPEC	<1.00E+02
Reactivity Cyanide (mg/kg)	50661E	10/09/89	DSPEC	<1.00E+02
Reactivity Cyanide (mg/kg)	50673E	10/11/89	DSPEC	<1.00E+02
Reactivity Cyanide (mg/kg)	51079E	3/21/90	DSPEC	<1.00E+02
Reactivity Sulfide (mg/kg)	50804E	11/28/89	DTITRA	<1.00E+02
Reactivity Sulfide (mg/kg)	50661E	10/09/89	DTITRA	<1.00E+02
Reactivity Sulfide (mg/kg)	50673E	10/11/89	DTITRA	<1.00E+02
Reactivity Sulfide (mg/kg)	51079E	3/21/90	DTITRA	<1.00E+02
Suspended Solids	50804	11/28/89	SSOLID	<5.00E+03
Suspended Solids	50661	10/09/89	SSOLID	<5.00E+03
Suspended Solids	50673	10/11/89	SSOLID	2.20E+04
Suspended Solids	51079	3/21/90	SSOLID	<5.00E+03
TDS	50804	11/28/89	TDS	5.90E+04
TDS	50661	10/09/89	TDS	7.80E+04
TDS	50673	10/11/89	TDS	6.20E+04
TDS	51079	3/21/90	TDS	3.40E+04
Temperature (°C)	50804	11/28/89	TEMP-F1d	1.50E+01
Temperature (°C)	50661	10/09/89	TEMP-F1d	2.13E+01
Temperature (°C)	50673	10/11/89	TEMP-F1d	2.26E+01
Temperature (°C)	51079	3/21/90	TEMP-F1d	1.73E+01
TOC	50804	11/28/89	TOC	<1.00E+03
TOC	50661	10/09/89	TOC	<1.30E+03
TOC	50673	10/11/89	TOC	<1.90E+03
TOC	51079	3/21/90	TOC	1.10E+03
Total Carbon	50804	11/28/89	TC	1.19E+04
Total Carbon	50661	10/09/89	TC	1.30E+04
Total Carbon	50673	10/11/89	TC	1.20E+04
Total Carbon	51079	3/21/90	TC	1.30E+04
TOX (as C1)	50804	11/28/89	LTOX	1.11E+02
TOX (as C1)	50661	10/09/89	LTOX	1.27E+02
TOX (as C1)	50673	10/11/89	LTOX	1.33E+02
TOX (as C1)	51079	3/21/90	LTOX	8.40E+01
²⁴¹ Am (pCi/L)	50804	11/28/89	AEA	3.96E-02
²⁴¹ Am (pCi/L)	50661	10/09/89	AEA	2.95E+00
²⁴¹ Am (pCi/L)	50673	10/11/89	AEA	7.96E-02
²⁴¹ Am (pCi/L)	51079	3/21/90	AEA	7.44E-02
¹⁴ C (pCi/L)	50804	11/28/89	LSC	5.59E+00
¹⁴ C (pCi/L)	50661	10/09/89	LSC	<1.49E+00
¹⁴ C (pCi/L)	50673	10/11/89	LSC	<1.80E+00
¹⁴ C (pCi/L)	51079	3/21/90	LSC	<1.55E+00

Table B-1. Chemical Raw Data.
 (sheet 6 of 8)

Constituent	Sample #	Date	Method	Result
³ H (pCi/L)	50661	10/09/89	LSC	2.90E+02
³ H (pCi/L)	50673	10/11/89	LSC	<9.74E+01
³ H (pCi/L)	51079	3/21/90	LSC	<1.37E+02
²³⁸ Pu (pCi/L)	50804	11/28/89	AEA	4.17E-03
²³⁸ Pu (pCi/L)	50661	10/09/89	AEA	4.31E-02
²³⁸ Pu (pCi/L)	50673	10/11/89	AEA	1.53E-02
²³⁸ Pu (pCi/L)	51079	3/21/90	AEA	<1.75E-03
^{239,240} Pu (pCi/L)	50804	11/28/89	AEA	2.79E-02
^{239,240} Pu (pCi/L)	50661	10/09/89	AEA	7.42E-01
^{239,240} Pu (pCi/L)	50673	10/11/89	AEA	7.70E-02
^{239,240} Pu (pCi/L)	51079	3/21/90	AEA	3.78E-02
Radium Total (pCi/L)	50804	11/28/89	Alpha-Ra	1.74E-01
Radium Total (pCi/L)	50661	10/09/89	Alpha-Ra	<1.05E-01
Radium Total (pCi/L)	51079	3/21/90	Alpha-Ra	<4.54E-03
⁹⁰ Sr (pCi/L)	50804	11/28/89	Beta	<9.50E-02
⁹⁰ Sr (pCi/L)	50661	10/09/89	Beta	2.93E-01
⁹⁰ Sr (pCi/L)	50673	10/11/89	Beta	<7.30E-03
⁹⁰ Sr (pCi/L)	51079	3/21/90	Beta	<9.93E-02
²³⁴ U (pCi/L)	50804	11/28/89	AEA	1.14E-01
²³⁴ U (pCi/L)	50661	10/09/89	AEA	9.08E-02
²³⁴ U (pCi/L)	50673	10/11/89	AEA	6.20E-02
²³⁴ U (pCi/L)	51079	3/21/90	AEA	1.55E-01
²³⁸ U (pCi/L)	50804	11/28/89	AEA	8.90E-02
²³⁸ U (pCi/L)	50661	10/09/89	AEA	1.28E-01
²³⁸ U (pCi/L)	50673	10/11/89	AEA	5.97E-02
²³⁸ U (pCi/L)	51079	3/21/90	AEA	1.30E-01

NOTES:

Sample# is the number of the sample. See chapter three for corresponding chain-of-custody number.

Date is the sampling date.

Results are in ppb (parts per billion) unless otherwise indicated.

The following table lists the methods that are coded in the method column.

Code	Analytical Method	Reference
ABN	Semivolatile Organics (GC/MS)	USEPA-8270
AEA	²⁴¹ Am	UST-20Am01
AEA	Curium Isotopes	UST-20Am/Cm01
AEA	Plutonium Isotopes	UST-20Pu01
AEA	Uranium Isotopes	UST-20U01
ALPHA	Alpha Counting	EPA-680/4-75/1
ALPHA-Ra	Total Radium Alpha Counting	ASTM-D2460
BETA	Beta Counting	EPA-680/4-75/1

Table B-1. Chemical Raw Data.
 (sheet 7 of 8)

Code	Analytical Method	Reference
BETA	⁹⁰ Sr	UST-20Sr02
COLIF	Coliform Bacteria	USEPA-9131
COLIFMF	Coliform Bacteria (Membrane Filter)	USEPA-9132
COND-Fld	Conductivity-Field	ASTM-D1125A
COND-Lab	Conductivity-Laboratory	ASTM-D1125A
CVAA	Mercury	USEPA-7470
CVAA/M	Mercury-Mixed Matrix	USEPA-7470
DIGC	Direct Aqueous Injection (GC)	UST-70DIGC
DIMS	Direct Aqueous Injection (GC/MS)	"USEPA-8240"
DSPEC	Reactive Cyanide (Distillation, Spectroscopy)	USEPA-CHAPTER 7
DTITRA	Reactive Sulfide (Distillation, Titration)	USEPA-CHAPTER 7
FLUOR	Uranium (Fluorometry)	ASTM-D2907-83
GEA	Gamma Energy Analysis Spectroscopy	ASTM-D3649-85
GFAA	Arsenic (AA, Furnace Technique)	USEPA-7060
GFAA	Lead (AA, Furnace Technique)	USEPA-7421
GFAA	Selenium (AA, Furnace Technique)	USEPA-7740
GFAA	Thallium (AA, Furnace Technique)	USEPA-7841
IC	Ion Chromatography	EPA-600/4-84-01
ICP	Atomic Emission Spectroscopy (ICP)	USEPA-6010
ICP/M	Atomic Emission Spectroscopy (ICP)-Mixed Matrix	USEPA-6010
IGNIT	Pensky-Martens Closed-Cup Ignitability	USEPA-1010
ISE	Fluoride-Low Detection Limit	ASTM-D1179-80-B
ISE	Ammonium Ion	ASTM-D1426-D
LALPHA	Alpha Activity-Low Detection Limit	EPA-680/4-75/1
LEPD	¹²⁹ I	UST-20I02
LSC	¹⁴ C	UST-20C01
LSC	Tritium	UST-20H03
LTOX	Total Organic Halides-Low Detection Limit	USEPA-9020
PH-Fld	pH-Field	USEPA-9040
PH-Lab	pH-Laboratory	USEPA-9040
SPEC	Total and Amenable Cyanide (Spectroscopy)	USEPA-9010
SPEC	Hydrazine-Low Detection Limit (Spectroscopy)	ASTM-D1385
SSOLID	Suspended Solids	SM-208D
TC	Total Carbon	USEPA-9060
TDS	Total Dissolved Solids	SM-208B
TEMP-Fld	Temperature-Field	Local
TITRA	Alkalinity-Method B (Titration)	ASTM-D1067B
TITRA	Sulfides (Titration)	USEPA-9030

Table B-1. Chemical Raw Data. (sheet 8 of 32)
(sheet 8 of 8)

Code	Analytical Method	Reference
TOC	Total Organic Carbon	USEPA-9060
TOX	Total Organic Halides	USEPA-9020
VOA	Volatile Organics (GC/MS)	USEPA-8240

Analytical Method Acronyms:

atomic absorption spectroscopy (AA)
gas chromatography (GC)
mass spectrometry (MS)
inductively-coupled plasma spectroscopy (ICP)

References:

- ASTM - "1986 Annual Book of ASTM Standards", American Society for Testing and Materials, Philadelphia, Pennsylvania.
- EPA - Various methods of the U.S. Environmental Protection Agency, Washington, D.C.
- UST - Methods of the United States Testing Company, Incorporated, Richland, Washington.
- SM - "Standard Methods for the Examination of Water and Wastewater", 16th ed., American Public Health Association, American Water Works Association and Water Pollution Control Federation, Washington, D.C.
- USEPA - "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", 3rd ed., SW-846, U.S. Environmental Protection Agency, Washington, D.C.

Table B-2. Total Data.
 (sheet 1 of 49)

Constituent	Sample #	Date	Method	Result
Aluminum	50053	5/31/86	ICP	1.62E+02
Aluminum	50113	8/18/86	ICP	2.44E+02
Aluminum	50149	10/03/86	ICP	<1.50E+02
Aluminum	50214	1/06/87	ICP	<1.50E+02
Aluminum	50454	9/16/88	ICP	<1.50E+02
Aluminum	50460	9/23/88	ICP	<1.50E+02
Aluminum	50470	10/10/88	ICP	<1.50E+02
Aluminum	50478	10/24/88	ICP	<1.50E+02
Aluminum	50490	11/04/88	ICP	<1.50E+02
Aluminum	50502	12/02/88	ICP	<1.50E+02
Aluminum	50512	12/16/88	ICP	<1.50E+02
Aluminum	50514	12/16/88	ICP	<1.50E+02
Aluminum	50534	2/15/89	ICP	<1.50E+02
Aluminum	50542	3/02/89	ICP	<1.50E+02
Aluminum	50558	3/15/89	ICP	<1.50E+02
Aluminum	50572	3/29/89	ICP	<1.50E+02
Aluminum	50596	4/12/89	ICP	<1.50E+02
Aluminum	50804	11/28/89	ICP	<1.50E+02
Aluminum	50014	9/11/85	ICP	3.08E+02
Aluminum	50456	9/16/88	ICP	<1.50E+02
Aluminum	50462	9/23/88	ICP	<1.50E+02
Aluminum	50468	10/10/88	ICP	<1.50E+02
Aluminum	50476	10/24/88	ICP	<1.50E+02
Aluminum	50488	11/04/88	ICP	<1.50E+02
Aluminum	50498	11/18/88	ICP	<1.50E+02
Aluminum	50500	12/02/88	ICP	<1.50E+02
Aluminum	50532	2/15/89	ICP	<1.50E+02
Aluminum	50544	3/02/89	ICP	<1.50E+02
Aluminum	50556	3/15/89	ICP	<1.50E+02
Aluminum	50570	3/29/89	ICP	<1.50E+02
Aluminum	50593	4/11/89	ICP	<1.50E+02
Aluminum	50661	10/09/89	ICP	<1.50E+02
Aluminum	50673	10/11/89	ICP	<1.50E+02
Aluminum	50071	6/19/86	ICP	2.43E+02
Aluminum	50085	7/07/86	ICP	5.84E+03
Aluminum	51079	3/21/90	ICP	<1.50E+02
Arsenic (EP Toxic)	50558E	3/15/89	ICP	<5.00E+01
Arsenic (EP Toxic)	50572E	3/29/89	ICP	<5.00E+01
Arsenic (EP Toxic)	50596E	4/12/89	ICP	<5.00E+01
Arsenic (EP Toxic)	50804E	11/28/89	ICP	<5.00E+02
Arsenic (EP Toxic)	50556E	3/15/89	ICP	<5.00E+01
Arsenic (EP Toxic)	50570E	3/29/89	ICP	<5.00E+01
Arsenic (EP Toxic)	50593E	4/11/89	ICP	<5.00E+01
Arsenic (EP Toxic)	50661E	10/09/89	ICP	<5.00E+02
Arsenic (EP Toxic)	50673E	10/11/89	ICP	<5.00E+02
Arsenic (EP Toxic)	51079E	3/21/90	ICP	<5.00E+02

Table B-2. Total Data.
 (sheet 2 of 49)

Constituent	Sample #	Date	Method	Result
Barium	50053	5/31/86	ICP	3.10E+01
Barium	50113	8/18/86	ICP	3.30E+01
Barium	50149	10/03/86	ICP	2.20E+01
Barium	50214	1/06/87	ICP	2.40E+01
Barium	50454	9/16/88	ICP	2.80E+01
Barium	50460	9/23/88	ICP	2.60E+01
Barium	50470	10/10/88	ICP	2.90E+01
Barium	50478	10/24/88	ICP	2.50E+01
Barium	50490	11/04/88	ICP	2.20E+01
Barium	50502	12/02/88	ICP	1.60E+01
Barium	50512	12/16/88	ICP	2.00E+01
Barium	50514	12/16/88	ICP	1.90E+01
Barium	50534	2/15/89	ICP	1.90E+01
Barium	50542	3/02/89	ICP	2.00E+01
Barium	50558	3/15/89	ICP	2.50E+01
Barium	50572	3/29/89	ICP	2.40E+01
Barium	50596	4/12/89	ICP	2.40E+01
Barium	50804	11/28/89	ICP	2.50E+01
Barium	50014	9/11/85	ICP	3.20E+01
Barium	50456	9/16/88	ICP	2.70E+01
Barium	50462	9/23/88	ICP	3.00E+01
Barium	50468	10/10/88	ICP	2.50E+01
Barium	50476	10/24/88	ICP	2.40E+01
Barium	50488	11/04/88	ICP	2.10E+01
Barium	50498	11/18/88	ICP	1.90E+01
Barium	50500	12/02/88	ICP	1.90E+01
Barium	50532	2/15/89	ICP	1.70E+01
Barium	50544	3/02/89	ICP	2.20E+01
Barium	50556	3/15/89	ICP	2.20E+01
Barium	50570	3/29/89	ICP	2.50E+01
Barium	50593	4/11/89	ICP	2.40E+01
Barium	50661	10/09/89	ICP	3.30E+01
Barium	50673	10/11/89	ICP	3.00E+01
Barium	50071	6/19/86	ICP	2.80E+01
Barium	50085	7/07/86	ICP	3.30E+01
Barium	51079	3/21/90	ICP	2.50E+01
Barium (EP Toxic)	50558E	3/15/89	ICP	2.41E+02
Barium (EP Toxic)	50572E	3/29/89	ICP	1.96E+02
Barium (EP Toxic)	50596E	4/12/89	ICP	1.62E+02
Barium (EP Toxic)	50804E	11/28/89	ICP	<1.00E+03
Barium (EP Toxic)	50556E	3/15/89	ICP	2.38E+02
Barium (EP Toxic)	50570E	3/29/89	ICP	1.91E+02
Barium (EP Toxic)	50593E	4/11/89	ICP	1.74E+02
Barium (EP Toxic)	50661E	10/09/89	ICP	<1.00E+03
Barium (EP Toxic)	50673E	10/11/89	ICP	<1.00E+03
Barium (EP Toxic)	51079E	3/21/90	ICP	<1.00E+03

Table B-2. Total Data.
 (sheet 3 of 49)

Constituent	Sample #	Date	Method	Result
Beryllium	50053	5/31/86	ICP	<5.00E+00
Beryllium	50113	8/18/86	ICP	<5.00E+00
Beryllium	50149	10/03/86	ICP	<5.00E+00
Beryllium	50214	1/06/87	ICP	<5.00E+00
Beryllium	50454	9/16/88	ICP	<5.00E+00
Beryllium	50460	9/23/88	ICP	<5.00E+00
Beryllium	50470	10/10/88	ICP	<5.00E+00
Beryllium	50478	10/24/88	ICP	6.00E+00
Beryllium	50490	11/04/88	ICP	<5.00E+00
Beryllium	50502	12/02/88	ICP	<5.00E+00
Beryllium	50512	12/16/88	ICP	<5.00E+00
Beryllium	50514	12/16/88	ICP	<5.00E+00
Beryllium	50534	2/15/89	ICP	<5.00E+00
Beryllium	50542	3/02/89	ICP	<5.00E+00
Beryllium	50558	3/15/89	ICP	<5.00E+00
Beryllium	50572	3/29/89	ICP	<5.00E+00
Beryllium	50596	4/12/89	ICP	<5.00E+00
Beryllium	50804	11/28/89	ICP	<5.00E+00
Beryllium	50014	9/11/85	ICP	<5.00E+00
Beryllium	50456	9/16/88	ICP	<5.00E+00
Beryllium	50462	9/23/88	ICP	<5.00E+00
Beryllium	50468	10/10/88	ICP	<5.00E+00
Beryllium	50476	10/24/88	ICP	<5.00E+00
Beryllium	50488	11/04/88	ICP	<5.00E+00
Beryllium	50498	11/18/88	ICP	<5.00E+00
Beryllium	50500	12/02/88	ICP	<5.00E+00
Beryllium	50532	2/15/89	ICP	<5.00E+00
Beryllium	50544	3/02/89	ICP	<5.00E+00
Beryllium	50556	3/15/89	ICP	<5.00E+00
Beryllium	50570	3/29/89	ICP	<5.00E+00
Beryllium	50593	4/11/89	ICP	<5.00E+00
Beryllium	50661	10/09/89	ICP	<5.00E+00
Beryllium	50673	10/11/89	ICP	<5.00E+00
Beryllium	50071	6/19/86	ICP	<5.00E+00
Beryllium	50085	7/07/86	ICP	<5.00E+00
Beryllium	51079	3/21/90	ICP	<5.00E+00
Boron	50534	2/15/89	ICP	<1.00E+01
Boron	50542	3/02/89	ICP	<1.00E+01
Boron	50558	3/15/89	ICP	1.90E+01
Boron	50572	3/29/89	ICP	<1.00E+01
Boron	50596	4/12/89	ICP	<1.00E+01
Boron	50804	11/28/89	ICP	<1.00E+01
Boron	50532	2/15/89	ICP	<1.00E+01
Boron	50544	3/02/89	ICP	<1.00E+01
Boron	50556	3/15/89	ICP	2.00E+01
Boron	50570	3/29/89	ICP	<1.00E+01

Table B-2. Total Data.
 (sheet 4 of 49)

Constituent	Sample #	Date	Method	Result
Boron	50593	4/11/89	ICP	<1.00E+01
Boron	50661	10/09/89	ICP	1.70E+01
Boron	50673	10/11/89	ICP	1.60E+01
Boron	51079	3/21/90	ICP	2.30E+01
Cadmium	50053	5/31/86	ICP	<2.00E+00
Cadmium	50113	8/18/86	ICP	<2.00E+00
Cadmium	50149	10/03/86	ICP	<2.00E+00
Cadmium	50214	1/06/87	ICP	<2.00E+00
Cadmium	50454	9/16/88	ICP	<2.00E+00
Cadmium	50460	9/23/88	ICP	<2.00E+00
Cadmium	50470	10/10/88	ICP	<2.00E+00
Cadmium	50478	10/24/88	ICP	<2.00E+00
Cadmium	50490	11/04/88	ICP	<2.00E+00
Cadmium	50502	12/02/88	ICP	<2.00E+00
Cadmium	50512	12/16/88	ICP	<2.00E+00
Cadmium	50514	12/16/88	ICP	<2.00E+00
Cadmium	50534	2/15/89	ICP	<2.00E+00
Cadmium	50542	3/02/89	ICP	<2.00E+00
Cadmium	50558	3/15/89	ICP	<2.00E+00
Cadmium	50572	3/29/89	ICP	<2.00E+00
Cadmium	50596	4/12/89	ICP	<2.00E+00
Cadmium	50804	11/28/89	ICP	<2.00E+00
Cadmium	50014	9/11/85	ICP	<2.00E+00
Cadmium	50456	9/16/88	ICP	<2.00E+00
Cadmium	50462	9/23/88	ICP	5.00E+00
Cadmium	50468	10/10/88	ICP	<2.00E+00
Cadmium	50476	10/24/88	ICP	<2.00E+00
Cadmium	50488	11/04/88	ICP	<2.00E+00
Cadmium	50498	11/18/88	ICP	<2.00E+00
Cadmium	50500	12/02/88	ICP	<2.00E+00
Cadmium	50532	2/15/89	ICP	<2.00E+00
Cadmium	50544	3/02/89	ICP	<2.00E+00
Cadmium	50556	3/15/89	ICP	<2.00E+00
Cadmium	50570	3/29/89	ICP	<2.00E+00
Cadmium	50593	4/11/89	ICP	<2.00E+00
Cadmium	50661	10/09/89	ICP	<2.00E+00
Cadmium	50673	10/11/89	ICP	<2.00E+00
Cadmium	50071	6/19/86	ICP	<2.00E+00
Cadmium	50085	7/07/86	ICP	<2.00E+00
Cadmium	51079	3/21/90	ICP	<2.00E+00
Cadmium (EP Toxic)	50558E	3/15/89	ICP	<1.00E+01
Cadmium (EP Toxic)	50572E	3/29/89	ICP	1.90E+01
Cadmium (EP Toxic)	50596E	4/12/89	ICP	<1.00E+01
Cadmium (EP Toxic)	50804E	11/28/89	ICP	<1.00E+02
Cadmium (EP Toxic)	50556E	3/15/89	ICP	<1.00E+01
Cadmium (EP Toxic)	50570E	3/29/89	ICP	<1.00E+01

Table B-2. Total Data.
 (sheet 5 of 49)

Constituent	Sample #	Date	Method	Result
Cadmium (EP Toxic)	50593E	4/11/89	ICP	<1.00E+01
Cadmium (EP Toxic)	50661E	10/09/89	ICP	<1.00E+02
Cadmium (EP Toxic)	50673E	10/11/89	ICP	<1.00E+02
Cadmium (EP Toxic)	51079E	3/21/90	ICP	<1.00E+02
Calcium	50053	5/31/86	ICP	2.00E+04
Calcium	50113	8/18/86	ICP	1.89E+04
Calcium	50149	10/03/86	ICP	1.77E+04
Calcium	50214	1/06/87	ICP	1.71E+04
Calcium	50454	9/16/88	ICP	1.85E+04
Calcium	50460	9/23/88	ICP	1.75E+04
Calcium	50470	10/10/88	ICP	2.15E+04
Calcium	50478	10/24/88	ICP	1.75E+04
Calcium	50490	11/04/88	ICP	1.63E+04
Calcium	50502	12/02/88	ICP	1.36E+04
Calcium	50512	12/16/88	ICP	1.51E+04
Calcium	50514	12/16/88	ICP	1.56E+04
Calcium	50534	2/15/89	ICP	1.41E+04
Calcium	50542	3/02/89	ICP	1.52E+04
Calcium	50558	3/15/89	ICP	1.67E+04
Calcium	50572	3/29/89	ICP	1.86E+04
Calcium	50596	4/12/89	ICP	2.00E+04
Calcium	50804	11/28/89	ICP	1.55E+04
Calcium	50014	9/11/85	ICP	1.81E+04
Calcium	50456	9/16/88	ICP	1.88E+04
Calcium	50462	9/23/88	ICP	2.02E+04
Calcium	50468	10/10/88	ICP	1.77E+04
Calcium	50476	10/24/88	ICP	1.68E+04
Calcium	50488	11/04/88	ICP	1.55E+04
Calcium	50498	11/18/88	ICP	1.41E+04
Calcium	50500	12/02/88	ICP	1.41E+04
Calcium	50532	2/15/89	ICP	1.31E+04
Calcium	50544	3/02/89	ICP	1.57E+04
Calcium	50556	3/15/89	ICP	1.64E+04
Calcium	50570	3/29/89	ICP	1.94E+04
Calcium	50593	4/11/89	ICP	2.04E+04
Calcium	50661	10/09/89	ICP	1.90E+04
Calcium	50673	10/11/89	ICP	1.76E+04
Calcium	50071	6/19/86	ICP	1.71E+04
Calcium	50085	7/07/86	ICP	1.85E+04
Calcium	51079	3/21/90	ICP	1.57E+04
Chloride	50053	5/31/86	IC	3.31E+03
Chloride	50113	8/18/86	IC	4.86E+03
Chloride	50149	10/03/86	IC	2.36E+03
Chloride	50214	1/06/87	IC	2.01E+03
Chloride	50454	9/16/88	IC	2.80E+03
Chloride	50460	9/23/88	IC	2.23E+03

Table B-2. Total Data.
 (sheet 6 of 49)

Constituent	Sample #	Date	Method	Result
Chloride	50470	10/10/88	IC	2.12E+03
Chloride	50478	10/24/88	IC	2.00E+03
Chloride	50490	11/04/88	IC	2.10E+03
Chloride	50502	12/02/88	IC	1.40E+03
Chloride	50512	12/16/88	IC	1.50E+03
Chloride	50514	12/16/88	IC	1.60E+03
Chloride	50534	2/15/89	IC	1.30E+03
Chloride	50542	3/02/89	IC	1.40E+03
Chloride	50558	3/15/89	IC	1.80E+03
Chloride	50572	3/29/89	IC	2.10E+03
Chloride	50596	4/12/89	IC	2.30E+03
Chloride	50804	11/28/89	IC	2.30E+03
Chloride	50014	9/11/85	IC	2.19E+03
Chloride	50456	9/16/88	IC	2.80E+03
Chloride	50462	9/23/88	IC	2.25E+03
Chloride	50468	10/10/88	IC	2.26E+03
Chloride	50476	10/24/88	IC	1.90E+03
Chloride	50488	11/04/88	IC	2.10E+03
Chloride	50498	11/18/88	IC	1.70E+03
Chloride	50500	12/02/88	IC	1.50E+03
Chloride	50532	2/15/89	IC	1.20E+03
Chloride	50544	3/02/89	IC	1.40E+03
Chloride	50556	3/15/89	IC	1.70E+03
Chloride	50570	3/29/89	IC	2.00E+03
Chloride	50593	4/11/89	IC	2.10E+03
Chloride	50661	10/09/89	IC	5.20E+03
Chloride	50673	10/11/89	IC	5.10E+03
Chloride	50071	6/19/86	IC	1.14E+03
Chloride	50085	7/07/86	IC	5.49E+04
Chloride	51079	3/21/90	IC	2.20E+03
Chromium	50053	5/31/86	ICP	<1.00E+01
Chromium	50113	8/18/86	ICP	<1.00E+01
Chromium	50149	10/03/86	ICP	<1.00E+01
Chromium	50214	1/06/87	ICP	<1.00E+01
Chromium	50454	9/16/88	ICP	<1.00E+01
Chromium	50460	9/23/88	ICP	<1.00E+01
Chromium	50470	10/10/88	ICP	<1.00E+01
Chromium	50478	10/24/88	ICP	<1.00E+01
Chromium	50490	11/04/88	ICP	<1.00E+01
Chromium	50502	12/02/88	ICP	<1.00E+01
Chromium	50512	12/16/88	ICP	<1.00E+01
Chromium	50514	12/16/88	ICP	<1.00E+01
Chromium	50534	2/15/89	ICP	<1.00E+01
Chromium	50542	3/02/89	ICP	<1.00E+01
Chromium	50558	3/15/89	ICP	<1.00E+01
Chromium	50572	3/29/89	ICP	<1.00E+01

Table B-2. Total Data.
 (sheet 7 of 49)

Constituent	Sample #	Date	Method	Result
Chromium	50596	4/12/89	ICP	<1.00E+01
Chromium	50804	11/28/89	ICP	<1.00E+01
Chromium	50014	9/11/85	ICP	1.10E+01
Chromium	50456	9/16/88	ICP	<1.00E+01
Chromium	50462	9/23/88	ICP	<1.00E+01
Chromium	50468	10/10/88	ICP	<1.00E+01
Chromium	50476	10/24/88	ICP	<1.00E+01
Chromium	50488	11/04/88	ICP	<1.00E+01
Chromium	50498	11/18/88	ICP	<1.00E+01
Chromium	50500	12/02/88	ICP	<1.00E+01
Chromium	50532	2/15/89	ICP	<1.00E+01
Chromium	50544	3/02/89	ICP	<1.00E+01
Chromium	50556	3/15/89	ICP	<1.00E+01
Chromium	50570	3/29/89	ICP	<1.00E+01
Chromium	50593	4/11/89	ICP	<1.00E+01
Chromium	50661	10/09/89	ICP	<1.00E+01
Chromium	50673	10/11/89	ICP	<1.00E+01
Chromium	50071	6/19/86	ICP	4.20E+01
Chromium	50085	7/07/86	ICP	<1.00E+01
Chromium	51079	3/21/90	ICP	<1.00E+01
Chromium (EP Toxic)	50558E	3/15/89	ICP	<5.00E+01
Chromium (EP Toxic)	50572E	3/29/89	ICP	<5.00E+01
Chromium (EP Toxic)	50596E	4/12/89	ICP	<5.00E+01
Chromium (EP Toxic)	50804E	11/28/89	ICP	<5.00E+02
Chromium (EP Toxic)	50556E	3/15/89	ICP	<5.00E+01
Chromium (EP Toxic)	50570E	3/29/89	ICP	<5.00E+01
Chromium (EP Toxic)	50593E	4/11/89	ICP	<5.00E+01
Chromium (EP Toxic)	50661E	10/09/89	ICP	<5.00E+02
Chromium (EP Toxic)	50673E	10/11/89	ICP	<5.00E+02
Chromium (EP Toxic)	51079E	3/21/90	ICP	<5.00E+02
Copper	50053	5/31/86	ICP	1.70E+01
Copper	50113	8/18/86	ICP	1.40E+01
Copper	50149	10/03/86	ICP	1.95E+02
Copper	50214	1/06/87	ICP	1.96E+02
Copper	50454	9/16/88	ICP	2.20E+01
Copper	50460	9/23/88	ICP	4.40E+01
Copper	50470	10/10/88	ICP	7.80E+01
Copper	50478	10/24/88	ICP	9.60E+01
Copper	50490	11/04/88	ICP	1.10E+02
Copper	50502	12/02/88	ICP	2.39E+02
Copper	50512	12/16/88	ICP	2.31E+02
Copper	50514	12/16/88	ICP	2.62E+02
Copper	50534	2/15/89	ICP	1.25E+02
Copper	50542	3/02/89	ICP	2.01E+02
Copper	50558	3/15/89	ICP	1.92E+02
Copper	50572	3/29/89	ICP	1.75E+02

Table B-2. Total Data.
 (sheet 8 of 49)

Constituent	Sample #	Date	Method	Result
Copper	50596	4/12/89	ICP	1.00E+02
Copper	50804	11/28/89	ICP	2.47E+02
Copper	50014	9/11/85	ICP	1.20E+02
Copper	50456	9/16/88	ICP	2.00E+01
Copper	50462	9/23/88	ICP	3.20E+01
Copper	50468	10/10/88	ICP	3.80E+01
Copper	50476	10/24/88	ICP	9.10E+01
Copper	50488	11/04/88	ICP	1.35E+02
Copper	50498	11/18/88	ICP	3.22E+02
Copper	50500	12/02/88	ICP	2.27E+02
Copper	50532	2/15/89	ICP	1.45E+02
Copper	50544	3/02/89	ICP	2.29E+02
Copper	50556	3/15/89	ICP	2.50E+02
Copper	50570	3/29/89	ICP	1.33E+02
Copper	50593	4/11/89	ICP	1.26E+02
Copper	50661	10/09/89	ICP	9.20E+01
Copper	50673	10/11/89	ICP	1.05E+02
Copper	50071	6/19/86	ICP	4.00E+01
Copper	50085	7/07/86	ICP	4.60E+01
Copper	51079	3/21/90	ICP	1.65E+02
Fluoride	50053	5/31/86	IC	<5.00E+02
Fluoride	50113	8/18/86	IC	<5.00E+02
Fluoride	50149	10/03/86	IC	<5.00E+02
Fluoride	50214	1/06/87	IC	<5.00E+02
Fluoride	50454	9/16/88	IC	<5.00E+02
Fluoride	50454	9/16/88	ISE	1.16E+02
Fluoride	50460	9/23/88	IC	<5.00E+02
Fluoride	50460	9/23/88	ISE	9.60E+01
Fluoride	50470	10/10/88	IC	<5.00E+02
Fluoride	50470	10/10/88	ISE	9.60E+01
Fluoride	50478	10/24/88	IC	<5.00E+02
Fluoride	50478	10/24/88	ISE	9.60E+01
Fluoride	50490	11/04/88	IC	<5.00E+02
Fluoride	50490	11/04/88	ISE	8.50E+01
Fluoride	50502	12/02/88	IC	<5.00E+02
Fluoride	50502	12/02/88	ISE	7.00E+01
Fluoride	50512	12/16/88	IC	<5.00E+02
Fluoride	50512	12/16/88	ISE	9.00E+01
Fluoride	50514	12/16/88	IC	<5.00E+02
Fluoride	50514	12/16/88	ISE	8.00E+01
Fluoride	50534	2/15/89	IC	<5.00E+02
Fluoride	50534	2/15/89	ISE	7.10E+01
Fluoride	50542	3/02/89	IC	<5.00E+02
Fluoride	50542	3/02/89	ISE	7.00E+01
Fluoride	50558	3/15/89	IC	<5.00E+02
Fluoride	50558	3/15/89	ISE	9.00E+01

Table B-2. Total Data.
 (sheet 9 of 49)

Constituent	Sample #	Date	Method	Result
Fluoride	50572	3/29/89	IC	<5.00E+02
Fluoride	50572	3/29/89	ISE	8.00E+01
Fluoride	50596	4/12/89	IC	<5.00E+02
Fluoride	50596	4/12/89	ISE	1.20E+02
Fluoride	50804	11/28/89	IC	<5.00E+02
Fluoride	50804	11/28/89	ISE	1.19E+02
Fluoride	50014	9/11/85	IC	<5.00E+02
Fluoride	50456	9/16/88	IC	<5.00E+02
Fluoride	50456	9/16/88	ISE	1.17E+02
Fluoride	50462	9/23/88	IC	<5.00E+02
Fluoride	50462	9/23/88	ISE	9.90E+01
Fluoride	50468	10/10/88	IC	<5.00E+02
Fluoride	50468	10/10/88	ISE	9.70E+01
Fluoride	50476	10/24/88	IC	<5.00E+02
Fluoride	50476	10/24/88	ISE	9.40E+01
Fluoride	50488	11/04/88	IC	<5.00E+02
Fluoride	50488	11/04/88	ISE	1.02E+02
Fluoride	50498	11/18/88	IC	1.90E+03
Fluoride	50498	11/18/88	ISE	1.99E+03
Fluoride	50500	12/02/88	IC	<5.00E+02
Fluoride	50500	12/02/88	ISE	7.00E+01
Fluoride	50532	2/15/89	IC	<5.00E+02
Fluoride	50532	2/15/89	ISE	4.77E+02
Fluoride	50544	3/02/89	IC	<5.00E+02
Fluoride	50544	3/02/89	ISE	7.00E+01
Fluoride	50556	3/15/89	IC	<5.00E+02
Fluoride	50556	3/15/89	ISE	8.00E+01
Fluoride	50570	3/29/89	IC	<5.00E+02
Fluoride	50570	3/29/89	ISE	8.00E+01
Fluoride	50593	4/11/89	IC	<5.00E+02
Fluoride	50593	4/11/89	ISE	1.00E+02
Fluoride	50661	10/09/89	IC	<5.00E+02
Fluoride	50661	10/09/89	ISE	1.42E+02
Fluoride	50673	10/11/89	IC	<5.00E+02
Fluoride	50673	10/11/89	ISE	1.35E+02
Fluoride	50071	6/19/86	IC	<5.00E+02
Fluoride	50085	7/07/86	IC	<5.00E+02
Fluoride	51079	3/21/90	IC	<5.00E+02
Fluoride	51079	3/21/90	ISE	1.04E+02
Iron	50053	5/31/86	ICP	9.00E+01
Iron	50113	8/18/86	ICP	6.10E+01
Iron	50149	10/03/86	ICP	6.80E+01
Iron	50214	1/06/87	ICP	5.60E+01
Iron	50454	9/16/88	ICP	4.50E+01
Iron	50460	9/23/88	ICP	6.00E+01
Iron	50470	10/10/88	ICP	7.70E+01

Table B-2. Total Data.
 (sheet 10 of 49)

Constituent	Sample #	Date	Method	Result
Iron	50478	10/24/88	ICP	5.20E+01
Iron	50490	11/04/88	ICP	8.50E+01
Iron	50502	12/02/88	ICP	6.60E+01
Iron	50512	12/16/88	ICP	9.60E+01
Iron	50514	12/16/88	ICP	9.00E+01
Iron	50534	2/15/89	ICP	6.60E+01
Iron	50542	3/02/89	ICP	7.80E+01
Iron	50558	3/15/89	ICP	1.08E+02
Iron	50572	3/29/89	ICP	1.16E+02
Iron	50596	4/12/89	ICP	1.96E+02
Iron	50804	11/28/89	ICP	4.50E+01
Iron	50014	9/11/85	ICP	6.30E+02
Iron	50456	9/16/88	ICP	6.50E+01
Iron	50462	9/23/88	ICP	7.90E+01
Iron	50468	10/10/88	ICP	5.70E+01
Iron	50476	10/24/88	ICP	5.40E+01
Iron	50488	11/04/88	ICP	8.00E+01
Iron	50498	11/18/88	ICP	8.00E+01
Iron	50500	12/02/88	ICP	7.20E+01
Iron	50532	2/15/89	ICP	5.90E+01
Iron	50544	3/02/89	ICP	9.00E+01
Iron	50556	3/15/89	ICP	8.40E+01
Iron	50570	3/29/89	ICP	8.90E+01
Iron	50593	4/11/89	ICP	1.04E+02
Iron	50661	10/09/89	ICP	1.10E+02
Iron	50673	10/11/89	ICP	2.25E+02
Iron	50071	6/19/86	ICP	5.60E+02
Iron	50085	7/07/86	ICP	1.22E+02
Iron	51079	3/21/90	ICP	1.25E+02
Lead (EP Toxic)	50558E	3/15/89	ICP	<5.00E+01
Lead (EP Toxic)	50572E	3/29/89	ICP	<5.00E+01
Lead (EP Toxic)	50596E	4/12/89	ICP	<5.00E+01
Lead (EP Toxic)	50804E	11/28/89	ICP	<5.00E+02
Lead (EP Toxic)	50556E	3/15/89	ICP	<5.00E+01
Lead (EP Toxic)	50570E	3/29/89	ICP	<5.00E+01
Lead (EP Toxic)	50593E	4/11/89	ICP	<5.00E+01
Lead (EP Toxic)	50661E	10/09/89	ICP	<5.00E+02
Lead (EP Toxic)	50673E	10/11/89	ICP	<5.00E+02
Lead (EP Toxic)	51079E	3/21/90	ICP	<5.00E+02
Magnesium	50053	5/31/86	ICP	4.55E+03
Magnesium	50113	8/18/86	ICP	4.13E+03
Magnesium	50149	10/03/86	ICP	3.85E+03
Magnesium	50214	1/06/87	ICP	3.88E+03
Magnesium	50454	9/16/88	ICP	3.95E+03
Magnesium	50460	9/23/88	ICP	3.73E+03
Magnesium	50470	10/10/88	ICP	4.70E+03

Table B-2. Total Data.
 (sheet 11 of 49)

Constituent	Sample #	Date	Method	Result
Magnesium	50478	10/24/88	ICP	3.64E+03
Magnesium	50490	11/04/88	ICP	3.24E+03
Magnesium	50502	12/02/88	ICP	2.81E+03
Magnesium	50512	12/16/88	ICP	3.37E+03
Magnesium	50514	12/16/88	ICP	3.49E+03
Magnesium	50534	2/15/89	ICP	3.17E+03
Magnesium	50542	3/02/89	ICP	3.65E+03
Magnesium	50558	3/15/89	ICP	4.03E+03
Magnesium	50572	3/29/89	ICP	4.52E+03
Magnesium	50596	4/12/89	ICP	4.83E+03
Magnesium	50804	11/28/89	ICP	3.53E+03
Magnesium	50014	9/11/85	ICP	3.78E+03
Magnesium	50456	9/16/88	ICP	4.01E+03
Magnesium	50462	9/23/88	ICP	4.29E+03
Magnesium	50468	10/10/88	ICP	3.85E+03
Magnesium	50476	10/24/88	ICP	3.50E+03
Magnesium	50488	11/04/88	ICP	3.13E+03
Magnesium	50498	11/18/88	ICP	2.94E+03
Magnesium	50500	12/02/88	ICP	2.95E+03
Magnesium	50532	2/15/89	ICP	2.94E+03
Magnesium	50544	3/02/89	ICP	3.75E+03
Magnesium	50556	3/15/89	ICP	3.97E+03
Magnesium	50570	3/29/89	ICP	4.70E+03
Magnesium	50593	4/11/89	ICP	4.87E+03
Magnesium	50661	10/09/89	ICP	4.35E+03
Magnesium	50673	10/11/89	ICP	4.07E+03
Magnesium	50071	6/19/86	ICP	3.86E+03
Magnesium	50085	7/07/86	ICP	4.18E+03
Magnesium	51079	3/21/90	ICP	3.83E+03
Manganese	50053	5/31/86	ICP	9.00E+00
Manganese	50113	8/18/86	ICP	5.00E+00
Manganese	50149	10/03/86	ICP	1.90E+01
Manganese	50214	1/06/87	ICP	5.00E+00
Manganese	50454	9/16/88	ICP	6.00E+00
Manganese	50460	9/23/88	ICP	7.00E+00
Manganese	50470	10/10/88	ICP	7.00E+00
Manganese	50478	10/24/88	ICP	<5.00E+00
Manganese	50490	11/04/88	ICP	5.00E+00
Manganese	50502	12/02/88	ICP	<5.00E+00
Manganese	50512	12/16/88	ICP	<5.00E+00
Manganese	50514	12/16/88	ICP	5.00E+00
Manganese	50534	2/15/89	ICP	<5.00E+00
Manganese	50542	3/02/89	ICP	<5.00E+00
Manganese	50558	3/15/89	ICP	<5.00E+00
Manganese	50572	3/29/89	ICP	<5.00E+00
Manganese	50596	4/12/89	ICP	6.00E+00

Table B-2. Total Data.
 (sheet 12 of 49)

Constituent	Sample #	Date	Method	Result
Manganese	50804	11/28/89	ICP	<5.00E+00
Manganese	50014	9/11/85	ICP	2.00E+01
Manganese	50456	9/16/88	ICP	6.00E+00
Manganese	50462	9/23/88	ICP	7.00E+00
Manganese	50468	10/10/88	ICP	<5.00E+00
Manganese	50476	10/24/88	ICP	5.00E+00
Manganese	50488	11/04/88	ICP	<5.00E+00
Manganese	50498	11/18/88	ICP	<5.00E+00
Manganese	50500	12/02/88	ICP	7.00E+00
Manganese	50532	2/15/89	ICP	<5.00E+00
Manganese	50544	3/02/89	ICP	<5.00E+00
Manganese	50556	3/15/89	ICP	<5.00E+00
Manganese	50570	3/29/89	ICP	<5.00E+00
Manganese	50593	4/11/89	ICP	<5.00E+00
Manganese	50661	10/09/89	ICP	1.00E+01
Manganese	50673	10/11/89	ICP	9.00E+00
Manganese	50071	6/19/86	ICP	1.40E+01
Manganese	50085	7/07/86	ICP	1.10E+01
Manganese	51079	3/21/90	ICP	<5.00E+00
Mercury	50053	5/31/86	CVAA	<1.00E-01
Mercury	50113	8/18/86	CVAA	3.50E-01
Mercury	50149	10/03/86	CVAA	1.25E+00
Mercury	50214	1/06/87	CVAA	2.10E-01
Mercury	50454	9/16/88	CVAA	1.00E-01
Mercury	50460	9/23/88	CVAA	<1.00E-01
Mercury	50470	10/10/88	CVAA	<1.00E-01
Mercury	50478	10/24/88	CVAA	<1.00E-01
Mercury	50490	11/04/88	CVAA	<1.00E-01
Mercury	50502	12/02/88	CVAA	<1.00E-01
Mercury	50512	12/16/88	CVAA	<1.00E-01
Mercury	50514	12/16/88	CVAA	<1.00E-01
Mercury	50534	2/15/89	CVAA	<1.00E-01
Mercury	50542	3/02/89	CVAA	<1.00E-01
Mercury	50558	3/15/89	CVAA	<1.00E-01
Mercury	50572	3/29/89	CVAA	<1.00E-01
Mercury	50596	4/12/89	CVAA	<1.00E-01
Mercury	50804	11/28/89	CVAA	<1.00E-01
Mercury	50014	9/11/85	CVAA	1.00E-01
Mercury	50456	9/16/88	CVAA	<1.00E-01
Mercury	50462	9/23/88	CVAA	1.00E-01
Mercury	50468	10/10/88	CVAA	<1.00E-01
Mercury	50476	10/24/88	CVAA	<1.00E-01
Mercury	50488	11/04/88	CVAA	<1.00E-01
Mercury	50498	11/18/88	CVAA	<1.00E-01
Mercury	50500	12/02/88	CVAA	<1.00E-01
Mercury	50532	2/15/89	CVAA	<1.00E-01

Table B-2. Total Data.
 (sheet 13 of 49)

Constituent	Sample #	Date	Method	Result
Mercury	50544	3/02/89	CVAA	<1.00E-01
Mercury	50556	3/15/89	CVAA	<1.00E-01
Mercury	50570	3/29/89	CVAA	<1.00E-01
Mercury	50593	4/11/89	CVAA	<1.00E-01
Mercury	50661	10/09/89	CVAA	<1.00E-01
Mercury	50673	10/11/89	CVAA	<1.00E-01
Mercury	50071	6/19/86	CVAA	3.80E-01
Mercury	50085	7/07/86	CVAA	4.20E+00
Mercury	51079	3/21/90	CVAA	<1.00E-01
Mercury (EP Toxic)	50558E	3/15/89	CVAA/M	<1.00E+01
Mercury (EP Toxic)	50572E	3/29/89	CVAA/M	<1.00E+01
Mercury (EP Toxic)	50596E	4/12/89	CVAA/M	<1.00E+01
Mercury (EP Toxic)	50804E	11/28/89	CVAA/M	<2.00E+01
Mercury (EP Toxic)	50556E	3/15/89	CVAA/M	<1.00E+01
Mercury (EP Toxic)	50570E	3/29/89	CVAA/M	<1.00E+01
Mercury (EP Toxic)	50593E	4/11/89	CVAA/M	<1.00E+01
Mercury (EP Toxic)	50661E	10/09/89	CVAA/M	<2.00E+01
Mercury (EP Toxic)	50673E	10/11/89	CVAA/M	<2.00E+01
Mercury (EP Toxic)	51079E	3/21/90	CVAA/M	<2.00E+01
Nickel	50053	5/31/86	ICP	<1.00E+01
Nickel	50113	8/18/86	ICP	<1.00E+01
Nickel	50149	10/03/86	ICP	<1.00E+01
Nickel	50214	1/06/87	ICP	<1.00E+01
Nickel	50454	9/16/88	ICP	<1.00E+01
Nickel	50460	9/23/88	ICP	<1.00E+01
Nickel	50470	10/10/88	ICP	<1.00E+01
Nickel	50478	10/24/88	ICP	<1.00E+01
Nickel	50490	11/04/88	ICP	<1.00E+01
Nickel	50502	12/02/88	ICP	<1.00E+01
Nickel	50512	12/16/88	ICP	<1.00E+01
Nickel	50514	12/16/88	ICP	<1.00E+01
Nickel	50534	2/15/89	ICP	<1.00E+01
Nickel	50542	3/02/89	ICP	<1.00E+01
Nickel	50558	3/15/89	ICP	<1.00E+01
Nickel	50572	3/29/89	ICP	<1.00E+01
Nickel	50596	4/12/89	ICP	<1.00E+01
Nickel	50804	11/28/89	ICP	<1.00E+01
Nickel	50014	9/11/85	ICP	<1.00E+01
Nickel	50456	9/16/88	ICP	<1.00E+01
Nickel	50462	9/23/88	ICP	<1.00E+01
Nickel	50468	10/10/88	ICP	<1.00E+01
Nickel	50476	10/24/88	ICP	<1.00E+01
Nickel	50488	11/04/88	ICP	<1.00E+01
Nickel	50498	11/18/88	ICP	<1.00E+01
Nickel	50500	12/02/88	ICP	<1.00E+01
Nickel	50532	2/15/89	ICP	<1.00E+01

WHC-EP-0342 Addendum 13 08/31/90
 222-S Laboratory Wastewater

Table B-2. Total Data.
 (sheet 14 of 49)

Constituent	Sample #	Date	Method	Result
Nickel	50544	3/02/89	ICP	<1.00E+01
Nickel	50556	3/15/89	ICP	<1.00E+01
Nickel	50570	3/29/89	ICP	<1.00E+01
Nickel	50593	4/11/89	ICP	<1.00E+01
Nickel	50661	10/09/89	ICP	<1.00E+01
Nickel	50673	10/11/89	ICP	<1.00E+01
Nickel	50071	6/19/86	ICP	1.20E+01
Nickel	50085	7/07/86	ICP	<1.00E+01
Nickel	51079	3/21/90	ICP	<1.00E+01
Nitrate	50053	5/31/86	IC	8.13E+02
Nitrate	50113	8/18/86	IC	<5.00E+02
Nitrate	50149	10/03/86	IC	1.98E+03
Nitrate	50214	1/06/87	IC	1.64E+03
Nitrate	50454	9/16/88	IC	5.49E+02
Nitrate	50460	9/23/88	IC	<5.00E+02
Nitrate	50470	10/10/88	IC	8.70E+02
Nitrate	50478	10/24/88	IC	8.00E+02
Nitrate	50490	11/04/88	IC	6.00E+02
Nitrate	50502	12/02/88	IC	<5.00E+02
Nitrate	50512	12/16/88	IC	1.00E+03
Nitrate	50514	12/16/88	IC	1.90E+03
Nitrate	50534	2/15/89	IC	1.00E+03
Nitrate	50542	3/02/89	IC	6.00E+02
Nitrate	50558	3/15/89	IC	1.00E+03
Nitrate	50572	3/29/89	IC	9.00E+02
Nitrate	50596	4/12/89	IC	<5.00E+02
Nitrate	50804	11/28/89	IC	<5.00E+02
Nitrate	50014	9/11/85	IC	6.30E+02
Nitrate	50456	9/16/88	IC	2.07E+03
Nitrate	50462	9/23/88	IC	6.64E+02
Nitrate	50468	10/10/88	IC	<5.00E+02
Nitrate	50476	10/24/88	IC	<5.00E+02
Nitrate	50488	11/04/88	IC	2.10E+03
Nitrate	50498	11/18/88	IC	1.50E+03
Nitrate	50500	12/02/88	IC	<5.00E+02
Nitrate	50532	2/15/89	IC	1.20E+03
Nitrate	50544	3/02/89	IC	6.00E+02
Nitrate	50556	3/15/89	IC	<5.00E+02
Nitrate	50570	3/29/89	IC	6.00E+02
Nitrate	50593	4/11/89	IC	<5.00E+02
Nitrate	50661	10/09/89	IC	<5.00E+02
Nitrate	50673	10/11/89	IC	<5.00E+02
Nitrate	50071	6/19/86	IC	<5.00E+02
Nitrate	50085	7/07/86	IC	1.56E+03
Nitrate	51079	3/21/90	IC	8.00E+02
Potassium	50053	5/31/86	ICP	1.37E+03

Table B-2. Total Data.
 (sheet 15 of 49)

Constituent	Sample #	Date	Method	Result
Potassium	50113	8/18/86	ICP	1.01E+03
Potassium	50149	10/03/86	ICP	8.88E+02
Potassium	50214	1/06/87	ICP	1.10E+03
Potassium	50454	9/16/88	ICP	7.35E+02
Potassium	50460	9/23/88	ICP	6.44E+02
Potassium	50470	10/10/88	ICP	1.04E+03
Potassium	50478	10/24/88	ICP	6.70E+02
Potassium	50490	11/04/88	ICP	6.79E+02
Potassium	50502	12/02/88	ICP	4.94E+02
Potassium	50512	12/16/88	ICP	5.90E+02
Potassium	50514	12/16/88	ICP	6.37E+02
Potassium	50534	2/15/89	ICP	5.36E+02
Potassium	50542	3/02/89	ICP	5.56E+02
Potassium	50558	3/15/89	ICP	6.63E+02
Potassium	50572	3/29/89	ICP	9.13E+02
Potassium	50596	4/12/89	ICP	8.15E+02
Potassium	50804	11/28/89	ICP	6.93E+02
Potassium	50014	9/11/85	ICP	9.58E+02
Potassium	50456	9/16/88	ICP	7.51E+02
Potassium	50462	9/23/88	ICP	7.59E+02
Potassium	50468	10/10/88	ICP	7.97E+02
Potassium	50476	10/24/88	ICP	6.15E+02
Potassium	50488	11/04/88	ICP	6.62E+02
Potassium	50498	11/18/88	ICP	5.81E+02
Potassium	50500	12/02/88	ICP	5.16E+02
Potassium	50532	2/15/89	ICP	4.89E+02
Potassium	50544	3/02/89	ICP	5.61E+02
Potassium	50556	3/15/89	ICP	6.38E+02
Potassium	50570	3/29/89	ICP	9.53E+02
Potassium	50593	4/11/89	ICP	8.12E+02
Potassium	50661	10/09/89	ICP	8.56E+02
Potassium	50673	10/11/89	ICP	8.43E+02
Potassium	50071	6/19/86	ICP	8.47E+02
Potassium	50085	7/07/86	ICP	8.52E+02
Potassium	51079	3/21/90	ICP	6.64E+02
Selenium (EP Toxic)	50558E	3/15/89	ICP	<5.00E+01
Selenium (EP Toxic)	50572E	3/29/89	ICP	<5.00E+01
Selenium (EP Toxic)	50596E	4/12/89	ICP	<5.00E+01
Selenium (EP Toxic)	50804E	11/28/89	ICP	<5.00E+02
Selenium (EP Toxic)	50556E	3/15/89	ICP	<5.00E+01
Selenium (EP Toxic)	50570E	3/29/89	ICP	<5.00E+01
Selenium (EP Toxic)	50593E	4/11/89	ICP	<5.00E+01
Selenium (EP Toxic)	50661E	10/09/89	ICP	<5.00E+02
Selenium (EP Toxic)	50673E	10/11/89	ICP	<5.00E+02
Selenium (EP Toxic)	51079E	3/21/90	ICP	<5.00E+02
Silicon	50534	2/15/89	ICP	1.40E+03

Table B-2. Total Data.
 (sheet 16 of 49)

Constituent	Sample #	Date	Method	Result
Silicon	50542	3/02/89	ICP	1.37E+03
Silicon	50558	3/15/89	ICP	1.46E+03
Silicon	50572	3/29/89	ICP	1.85E+03
Silicon	50596	4/12/89	ICP	1.56E+03
Silicon	50804	11/28/89	ICP	1.94E+03
Silicon	50532	2/15/89	ICP	1.28E+03
Silicon	50544	3/02/89	ICP	1.43E+03
Silicon	50556	3/15/89	ICP	1.45E+03
Silicon	50570	3/29/89	ICP	1.92E+03
Silicon	50593	4/11/89	ICP	1.49E+03
Silicon	50661	10/09/89	ICP	2.05E+03
Silicon	50673	10/11/89	ICP	2.06E+03
Silicon	51079	3/21/90	ICP	1.74E+03
Silver (EP Toxic)	50558E	3/15/89	ICP	<5.00E+01
Silver (EP Toxic)	50572E	3/29/89	ICP	<5.00E+01
Silver (EP Toxic)	50596E	4/12/89	ICP	<5.00E+01
Silver (EP Toxic)	50804E	11/28/89	ICP	<5.00E+02
Silver (EP Toxic)	50556E	3/15/89	ICP	<5.00E+01
Silver (EP Toxic)	50570E	3/29/89	ICP	<5.00E+01
Silver (EP Toxic)	50593E	4/11/89	ICP	<5.00E+01
Silver (EP Toxic)	50661E	10/09/89	ICP	<5.00E+02
Silver (EP Toxic)	50673E	10/11/89	ICP	<5.00E+02
Silver (EP Toxic)	51079E	3/21/90	ICP	<5.00E+02
Sodium	50053	5/31/86	ICP	2.88E+03
Sodium	50113	8/18/86	ICP	2.78E+03
Sodium	50149	10/03/86	ICP	2.57E+03
Sodium	50214	1/06/87	ICP	2.60E+03
Sodium	50454	9/16/88	ICP	2.40E+03
Sodium	50460	9/23/88	ICP	2.11E+03
Sodium	50470	10/10/88	ICP	3.11E+03
Sodium	50478	10/24/88	ICP	2.56E+03
Sodium	50490	11/04/88	ICP	1.94E+03
Sodium	50502	12/02/88	ICP	1.18E+03
Sodium	50512	12/16/88	ICP	1.52E+03
Sodium	50514	12/16/88	ICP	1.65E+03
Sodium	50534	2/15/89	ICP	1.29E+03
Sodium	50542	3/02/89	ICP	1.53E+03
Sodium	50558	3/15/89	ICP	1.76E+03
Sodium	50572	3/29/89	ICP	2.74E+03
Sodium	50596	4/12/89	ICP	2.29E+03
Sodium	50804	11/28/89	ICP	1.82E+03
Sodium	50014	9/11/85	ICP	2.64E+03
Sodium	50456	9/16/88	ICP	2.35E+03
Sodium	50462	9/23/88	ICP	2.21E+03
Sodium	50468	10/10/88	ICP	2.02E+03
Sodium	50476	10/24/88	ICP	1.74E+03

Table B-2. Total Data.
 (sheet 17 of 49)

Constituent	Sample #	Date	Method	Result
Sodium	50488	11/04/88	ICP	1.99E+03
Sodium	50498	11/18/88	ICP	4.65E+03
Sodium	50500	12/02/88	ICP	1.28E+03
Sodium	50532	2/15/89	ICP	1.83E+03
Sodium	50544	3/02/89	ICP	1.67E+03
Sodium	50556	3/15/89	ICP	1.69E+03
Sodium	50570	3/29/89	ICP	2.32E+03
Sodium	50593	4/11/89	ICP	2.25E+03
Sodium	50661	10/09/89	ICP	2.55E+03
Sodium	50673	10/11/89	ICP	2.32E+03
Sodium	50071	6/19/86	ICP	4.64E+03
Sodium	50085	7/07/86	ICP	2.92E+03
Sodium	51079	3/21/90	ICP	1.83E+03
Strontium	50053	5/31/86	ICP	<3.00E+02
Strontium	50113	8/18/86	ICP	<3.00E+02
Strontium	50149	10/03/86	ICP	<3.00E+02
Strontium	50214	1/06/87	ICP	<3.00E+02
Strontium	50454	9/16/88	ICP	1.05E+02
Strontium	50460	9/23/88	ICP	9.90E+01
Strontium	50470	10/10/88	ICP	1.30E+02
Strontium	50478	10/24/88	ICP	9.70E+01
Strontium	50490	11/04/88	ICP	9.30E+01
Strontium	50502	12/02/88	ICP	6.70E+01
Strontium	50512	12/16/88	ICP	7.10E+01
Strontium	50514	12/16/88	ICP	7.40E+01
Strontium	50534	2/15/89	ICP	7.60E+01
Strontium	50542	3/02/89	ICP	8.50E+01
Strontium	50558	3/15/89	ICP	9.40E+01
Strontium	50572	3/29/89	ICP	1.01E+02
Strontium	50596	4/12/89	ICP	1.10E+02
Strontium	50804	11/28/89	ICP	7.80E+01
Strontium	50014	9/11/85	ICP	<3.00E+02
Strontium	50456	9/16/88	ICP	1.05E+02
Strontium	50462	9/23/88	ICP	1.12E+02
Strontium	50468	10/10/88	ICP	1.03E+02
Strontium	50476	10/24/88	ICP	9.30E+01
Strontium	50488	11/04/88	ICP	8.90E+01
Strontium	50498	11/18/88	ICP	7.40E+01
Strontium	50500	12/02/88	ICP	7.10E+01
Strontium	50532	2/15/89	ICP	7.00E+01
Strontium	50544	3/02/89	ICP	8.90E+01
Strontium	50556	3/15/89	ICP	9.40E+01
Strontium	50570	3/29/89	ICP	1.04E+02
Strontium	50593	4/11/89	ICP	1.08E+02
Strontium	50661	10/09/89	ICP	1.07E+02
Strontium	50673	10/11/89	ICP	9.80E+01

Table B-2. Total Data.
 (sheet 18 of 49)

Constituent	Sample #	Date	Method	Result
Strontium	50071	6/19/86	ICP	<3.00E+02
Strontium	50085	7/07/86	ICP	<3.00E+02
Strontium	51079	3/21/90	ICP	8.30E+01
Sulfate	50053	5/31/86	IC	1.57E+04
Sulfate	50113	8/18/86	IC	1.26E+04
Sulfate	50149	10/03/86	IC	1.31E+04
Sulfate	50214	1/06/87	IC	1.25E+04
Sulfate	50454	9/16/88	IC	1.72E+04
Sulfate	50460	9/23/88	IC	1.44E+04
Sulfate	50470	10/10/88	IC	1.55E+04
Sulfate	50478	10/24/88	IC	1.43E+04
Sulfate	50490	11/04/88	IC	1.47E+04
Sulfate	50502	12/02/88	IC	1.21E+04
Sulfate	50512	12/16/88	IC	1.21E+04
Sulfate	50514	12/16/88	IC	1.28E+04
Sulfate	50534	2/15/89	IC	1.33E+04
Sulfate	50542	3/02/89	IC	1.27E+04
Sulfate	50558	3/15/89	IC	1.49E+04
Sulfate	50572	3/29/89	IC	1.75E+04
Sulfate	50596	4/12/89	IC	1.90E+04
Sulfate	50804	11/28/89	IC	1.06E+04
Sulfate	50014	9/11/85	IC	2.03E+04
Sulfate	50456	9/16/88	IC	1.66E+04
Sulfate	50462	9/23/88	IC	1.46E+04
Sulfate	50468	10/10/88	IC	1.52E+04
Sulfate	50476	10/24/88	IC	1.41E+04
Sulfate	50488	11/04/88	IC	1.46E+04
Sulfate	50498	11/18/88	IC	1.20E+04
Sulfate	50500	12/02/88	IC	1.24E+04
Sulfate	50532	2/15/89	IC	1.26E+04
Sulfate	50544	3/02/89	IC	1.25E+04
Sulfate	50556	3/15/89	IC	1.39E+04
Sulfate	50570	3/29/89	IC	1.78E+04
Sulfate	50593	4/11/89	IC	1.81E+04
Sulfate	50661	10/09/89	IC	1.48E+04
Sulfate	50673	10/11/89	IC	1.49E+04
Sulfate	50071	6/19/86	IC	1.16E+04
Sulfate	50085	7/07/86	IC	1.04E+04
Sulfate	51079	3/21/90	IC	1.20E+04
Uranium	50053	5/31/86	FLUOR	7.09E-01
Uranium	50113	8/18/86	FLUOR	6.09E-01
Uranium	50149	10/03/86	FLUOR	7.43E-01
Uranium	50214	1/06/87	FLUOR	2.50E-01
Uranium	50454	9/16/88	FLUOR	8.06E-01
Uranium	50460	9/23/88	FLUOR	4.46E-01
Uranium	50470	10/10/88	FLUOR	9.38E-01

Table B-2. Total Data.
 (sheet 19 of 49)

Constituent	Sample #	Date	Method	Result
Uranium	50478	10/24/88	FLUOR	3.20E-01
Uranium	50490	11/04/88	FLUOR	6.24E-01
Uranium	50502	12/02/88	FLUOR	<1.50E-01
Uranium	50512	12/16/88	FLUOR	4.01E-01
Uranium	50514	12/16/88	FLUOR	3.76E-01
Uranium	50534	2/15/89	FLUOR	5.00E-01
Uranium	50542	3/02/89	FLUOR	4.05E-01
Uranium	50558	3/15/89	FLUOR	7.31E-01
Uranium	50572	3/29/89	FLUOR	4.21E-01
Uranium	50596	4/12/89	FLUOR	3.06E-01
Uranium	50804	11/28/89	FLUOR	3.46E-01
Uranium	50014	9/11/85	FLUOR	3.27E-01
Uranium	50456	9/16/88	FLUOR	9.79E-01
Uranium	50462	9/23/88	FLUOR	1.29E+00
Uranium	50468	10/10/88	FLUOR	6.10E-01
Uranium	50476	10/24/88	FLUOR	3.50E-01
Uranium	50488	11/04/88	FLUOR	1.14E+00
Uranium	50498	11/18/88	FLUOR	4.54E-01
Uranium	50500	12/02/88	FLUOR	<5.02E-02
Uranium	50532	2/15/89	FLUOR	2.37E-01
Uranium	50544	3/02/89	FLUOR	2.61E-01
Uranium	50556	3/15/89	FLUOR	2.57E-01
Uranium	50570	3/29/89	FLUOR	2.46E-01
Uranium	50593	4/11/89	FLUOR	3.79E-01
Uranium	50661	10/09/89	FLUOR	9.58E-01
Uranium	50673	10/11/89	FLUOR	4.81E-01
Uranium	50071	6/19/86	FLUOR	3.97E-01
Uranium	50085	7/07/86	FLUOR	5.24E-01
Uranium	51079	3/21/90	FLUOR	3.11E-01
Vanadium	50053	5/31/86	ICP	<5.00E+00
Vanadium	50113	8/18/86	ICP	<5.00E+00
Vanadium	50149	10/03/86	ICP	<5.00E+00
Vanadium	50214	1/06/87	ICP	<5.00E+00
Vanadium	50454	9/16/88	ICP	<5.00E+00
Vanadium	50460	9/23/88	ICP	<5.00E+00
Vanadium	50470	10/10/88	ICP	6.00E+00
Vanadium	50478	10/24/88	ICP	<5.00E+00
Vanadium	50490	11/04/88	ICP	<5.00E+00
Vanadium	50502	12/02/88	ICP	<5.00E+00
Vanadium	50512	12/16/88	ICP	<5.00E+00
Vanadium	50514	12/16/88	ICP	<5.00E+00
Vanadium	50534	2/15/89	ICP	<5.00E+00
Vanadium	50542	3/02/89	ICP	<5.00E+00
Vanadium	50558	3/15/89	ICP	<5.00E+00
Vanadium	50572	3/29/89	ICP	<5.00E+00
Vanadium	50596	4/12/89	ICP	<5.00E+00

Table B-2. Total Data.
 (sheet 20 of 49)

Constituent	Sample #	Date	Method	Result
Vanadium	50804	11/28/89	ICP	<5.00E+00
Vanadium	50014	9/11/85	ICP	2.20E+01
Vanadium	50456	9/16/88	ICP	<5.00E+00
Vanadium	50462	9/23/88	ICP	<5.00E+00
Vanadium	50468	10/10/88	ICP	<5.00E+00
Vanadium	50476	10/24/88	ICP	<5.00E+00
Vanadium	50488	11/04/88	ICP	<5.00E+00
Vanadium	50498	11/18/88	ICP	<5.00E+00
Vanadium	50500	12/02/88	ICP	<5.00E+00
Vanadium	50532	2/15/89	ICP	<5.00E+00
Vanadium	50544	3/02/89	ICP	<5.00E+00
Vanadium	50556	3/15/89	ICP	<5.00E+00
Vanadium	50570	3/29/89	ICP	<5.00E+00
Vanadium	50593	4/11/89	ICP	<5.00E+00
Vanadium	50661	10/09/89	ICP	7.00E+00
Vanadium	50673	10/11/89	ICP	<5.00E+00
Vanadium	50071	6/19/86	ICP	<5.00E+00
Vanadium	50085	7/07/86	ICP	<5.00E+00
Vanadium	51079	3/21/90	ICP	<5.00E+00
Zinc	50053	5/31/86	ICP	<5.00E+00
Zinc	50113	8/18/86	ICP	4.60E+01
Zinc	50149	10/03/86	ICP	2.10E+01
Zinc	50214	1/06/87	ICP	1.40E+01
Zinc	50454	9/16/88	ICP	2.10E+01
Zinc	50460	9/23/88	ICP	1.50E+01
Zinc	50470	10/10/88	ICP	2.50E+01
Zinc	50478	10/24/88	ICP	3.60E+01
Zinc	50490	11/04/88	ICP	2.20E+01
Zinc	50502	12/02/88	ICP	1.10E+01
Zinc	50512	12/16/88	ICP	1.80E+01
Zinc	50514	12/16/88	ICP	3.00E+01
Zinc	50534	2/15/89	ICP	1.40E+01
Zinc	50542	3/02/89	ICP	2.00E+01
Zinc	50558	3/15/89	ICP	2.10E+01
Zinc	50572	3/29/89	ICP	2.20E+01
Zinc	50596	4/12/89	ICP	1.40E+01
Zinc	50804	11/28/89	ICP	<5.00E+00
Zinc	50014	9/11/85	ICP	6.80E+01
Zinc	50456	9/16/88	ICP	1.80E+01
Zinc	50462	9/23/88	ICP	1.50E+01
Zinc	50468	10/10/88	ICP	8.00E+00
Zinc	50476	10/24/88	ICP	2.20E+01
Zinc	50488	11/04/88	ICP	2.70E+01
Zinc	50498	11/18/88	ICP	1.80E+01
Zinc	50500	12/02/88	ICP	2.00E+01
Zinc	50532	2/15/89	ICP	1.80E+01

Table B-2. Total Data.
 (sheet 21 of 49)

Constituent	Sample #	Date	Method	Result
Zinc	50544	3/02/89	ICP	1.70E+01
Zinc	50556	3/15/89	ICP	2.10E+01
Zinc	50570	3/29/89	ICP	6.00E+00
Zinc	50593	4/11/89	ICP	3.70E+01
Zinc	50661	10/09/89	ICP	1.80E+01
Zinc	50673	10/11/89	ICP	2.30E+01
Zinc	50071	6/19/86	ICP	1.18E+02
Zinc	50085	7/07/86	ICP	1.06E+02
Zinc	51079	3/21/90	ICP	1.50E+01
Acetone	50149	10/03/86	VOA	6.00E+01
Acetone	50454	9/16/88	VOA	7.00E+00
Acetone	50502	12/02/88	VOA	5.70E+01
Acetone	50502B	12/02/88	VOA	8.00E+00
Acetone	50512	12/16/88	VOA	1.00E+01
Acetone	50512B	12/16/88	VOA	2.12E+02
Acetone	50514	12/16/88	VOA	8.00E+00
Acetone	50514B	12/16/88	VOA	1.00E+01
Acetone	50534	2/15/89	VOA	1.10E+01
Acetone	50534	2/15/89	ABN	<1.00E+01
Acetone	50534B	2/15/89	VOA	1.00E+01
Acetone	50542	3/02/89	VOA	<8.00E+00
Acetone	50542	3/02/89	ABN	<1.00E+01
Acetone	50542B	3/02/89	VOA	<1.00E+01
Acetone	50558	3/15/89	VOA	3.50E+01
Acetone	50558	3/15/89	ABN	<1.00E+01
Acetone	50558B	3/15/89	VOA	<6.00E+00
Acetone	50572	3/29/89	VOA	<9.00E+00
Acetone	50572	3/29/89	ABN	<1.00E+01
Acetone	50572B	3/29/89	VOA	1.30E+01
Acetone	50596	4/12/89	VOA	<6.00E+00
Acetone	50596	4/12/89	ABN	<1.00E+01
Acetone	50596B	4/12/89	VOA	<1.00E+01
Acetone	50804	11/28/89	VOA	1.40E+01
Acetone	50804	11/28/89	ABN	<1.00E+01
Acetone	50804B	11/28/89	VOA	<1.00E+01
Acetone	50804T	11/28/89	VOA	<1.00E+01
Acetone	50488	11/04/88	VOA	1.20E+01
Acetone	50498	11/18/88	VOA	1.30E+01
Acetone	50500	12/02/88	VOA	3.50E+01
Acetone	50532	2/15/89	VOA	1.30E+01
Acetone	50532	2/15/89	ABN	<1.00E+01
Acetone	50532B	2/15/89	VOA	<5.00E+00
Acetone	50544	3/02/89	VOA	1.20E+01
Acetone	50544	3/02/89	ABN	<1.00E+01
Acetone	50544B	3/02/89	VOA	<5.00E+00
Acetone	50556	3/15/89	VOA	<8.00E+00

Table B-2. Total Data.
 (sheet 22 of 49)

Constituent	Sample #	Date	Method	Result
Acetone	50556	3/15/89	ABN	<1.00E+01
Acetone	50556B	3/15/89	VOA	<6.00E+00
Acetone	50570	3/29/89	VOA	1.90E+01
Acetone	50570	3/29/89	ABN	<1.00E+01
Acetone	50570B	3/29/89	VOA	<5.00E+00
Acetone	50593	4/11/89	VOA	<6.00E+00
Acetone	50593	4/11/89	ABN	<1.00E+01
Acetone	50593B	4/11/89	VOA	<1.00E+01
Acetone	50661	10/09/89	VOA	<1.00E+01
Acetone	50661	10/09/89	ABN	<1.00E+01
Acetone	50661B	10/09/89	VOA	<1.00E+01
Acetone	50661T	10/09/89	VOA	<1.00E+01
Acetone	50673	10/11/89	VOA	<1.00E+01
Acetone	50673	10/11/89	ABN	<1.00E+01
Acetone	50673B	10/11/89	VOA	<8.00E+00
Acetone	50673T	10/11/89	VOA	<1.00E+01
Acetone	51079	3/21/90	VOA	<7.00E+00
Acetone	51079	3/21/90	ABN	<1.00E+01
Acetone	51079B	3/21/90	VOA	<1.00E+01
Acetone	51079T	3/21/90	VOA	<1.00E+01
2-Acetothiophene	50071	6/19/86	ABN	1.00E+02
Ammonia	50053	5/31/86	ISE	<5.00E+01
Ammonia	50113	8/18/86	ISE	<5.00E+01
Ammonia	50149	10/03/86	ISE	3.90E+02
Ammonia	50214	1/06/87	ISE	<5.00E+01
Ammonia	50454	9/16/88	ISE	<5.00E+01
Ammonia	50460	9/23/88	ISE	<5.00E+01
Ammonia	50470	10/10/88	ISE	<5.00E+01
Ammonia	50478	10/24/88	ISE	<5.00E+01
Ammonia	50490	11/04/88	ISE	<5.00E+01
Ammonia	50502	12/02/88	ISE	<5.00E+01
Ammonia	50512	12/16/88	ISE	5.60E+01
Ammonia	50514	12/16/88	ISE	5.20E+01
Ammonia	50534	2/15/89	ISE	<5.00E+01
Ammonia	50542	3/02/89	ISE	<5.00E+01
Ammonia	50558	3/15/89	ISE	1.05E+03
Ammonia	50572	3/29/89	ISE	<5.00E+01
Ammonia	50596	4/12/89	ISE	<5.00E+01
Ammonia	50804	11/28/89	ISE	<5.00E+01
Ammonia	50014	9/11/85	ISE	2.50E+02
Ammonia	50456	9/16/88	ISE	<5.00E+01
Ammonia	50462	9/23/88	ISE	<5.00E+01
Ammonia	50468	10/10/88	ISE	<5.00E+01
Ammonia	50476	10/24/88	ISE	<5.00E+01
Ammonia	50488	11/04/88	ISE	<5.00E+01
Ammonia	50498	11/18/88	ISE	<5.00E+01

Table B-2. Total Data.
 (sheet 23 of 49)

Constituent	Sample #	Date	Method	Result
Ammonia	50500	12/02/88	ISE	<5.00E+01
Ammonia	50532	2/15/89	ISE	2.70E+02
Ammonia	50544	3/02/89	ISE	<5.00E+01
Ammonia	50556	3/15/89	ISE	6.00E+01
Ammonia	50570	3/29/89	ISE	<5.00E+01
Ammonia	50593	4/11/89	ISE	<5.00E+01
Ammonia	50661	10/09/89	ISE	9.10E+01
Ammonia	50673	10/11/89	ISE	7.80E+01
Ammonia	50071	6/19/86	ISE	5.01E+01
Ammonia	50085	7/07/86	ISE	6.26E+02
Ammonia	51079	3/21/90	ISE	<5.00E+01
Benzene	50053	5/31/86	VOA	<1.00E+01
Benzene	50113	8/18/86	VOA	<1.00E+01
Benzene	50113B	8/18/86	VOA	<1.00E+01
Benzene	50149	10/03/86	VOA	<1.00E+01
Benzene	50149B	10/03/86	VOA	<1.00E+01
Benzene	50214	1/06/87	VOA	<1.00E+01
Benzene	50214B	1/06/87	VOA	<1.00E+01
Benzene	50454	9/16/88	VOA	<5.00E+00
Benzene	50454B	9/16/88	VOA	<5.00E+00
Benzene	50460	9/23/88	VOA	<5.00E+00
Benzene	50460B	9/23/88	VOA	<5.00E+00
Benzene	50470	10/10/88	VOA	<5.00E+00
Benzene	50470B	10/10/88	VOA	<5.00E+00
Benzene	50478	10/24/88	VOA	<5.00E+00
Benzene	50478B	10/24/88	VOA	<5.00E+00
Benzene	50490	11/04/88	VOA	<5.00E+00
Benzene	50490B	11/04/88	VOA	<5.00E+00
Benzene	50502	12/02/88	VOA	<5.00E+00
Benzene	50502B	12/02/88	VOA	<5.00E+00
Benzene	50512	12/16/88	VOA	<5.00E+00
Benzene	50512B	12/16/88	VOA	<5.00E+00
Benzene	50514	12/16/88	VOA	<5.00E+00
Benzene	50514B	12/16/88	VOA	2.10E+01
Benzene	50534	2/15/89	VOA	<5.00E+00
Benzene	50534B	2/15/89	VOA	<5.00E+00
Benzene	50542	3/02/89	VOA	<5.00E+00
Benzene	50542B	3/02/89	VOA	<5.00E+00
Benzene	50558	3/15/89	VOA	<5.00E+00
Benzene	50558B	3/15/89	VOA	<5.00E+00
Benzene	50572	3/29/89	VOA	<5.00E+00
Benzene	50572B	3/29/89	VOA	<5.00E+00
Benzene	50596	4/12/89	VOA	<5.00E+00
Benzene	50596B	4/12/89	VOA	<5.00E+00
Benzene	50804	11/28/89	VOA	<5.00E+00
Benzene	50804B	11/28/89	VOA	<5.00E+00

Table B-2. Total Data.
 (sheet 24 of 49)

Constituent	Sample #	Date	Method	Result
Benzene	50804T	11/28/89	VOA	<5.00E+00
Benzene	50014	9/11/85	VOA	<1.00E+01
Benzene	50456	9/16/88	VOA	<5.00E+00
Benzene	50456B	9/16/88	VOA	<5.00E+00
Benzene	50462	9/23/88	VOA	<5.00E+00
Benzene	50462B	9/23/88	VOA	<5.00E+00
Benzene	50468	10/10/88	VOA	<5.00E+00
Benzene	50468B	10/10/88	VOA	<5.00E+00
Benzene	50476	10/24/88	VOA	<5.00E+00
Benzene	50476B	10/24/88	VOA	<5.00E+00
Benzene	50488	11/04/88	VOA	<5.00E+00
Benzene	50488B	11/04/88	VOA	<5.00E+00
Benzene	50498	11/18/88	VOA	<5.00E+00
Benzene	50498B	11/18/88	VOA	<5.00E+00
Benzene	50500	12/02/88	VOA	<5.00E+00
Benzene	50500B	12/02/88	VOA	<5.00E+00
Benzene	50532	2/15/89	VOA	<5.00E+00
Benzene	50532B	2/15/89	VOA	<5.00E+00
Benzene	50544	3/02/89	VOA	<5.00E+00
Benzene	50544B	3/02/89	VOA	<5.00E+00
Benzene	50556	3/15/89	VOA	<5.00E+00
Benzene	50556B	3/15/89	VOA	<5.00E+00
Benzene	50570	3/29/89	VOA	<5.00E+00
Benzene	50570B	3/29/89	VOA	<5.00E+00
Benzene	50593	4/11/89	VOA	<5.00E+00
Benzene	50593B	4/11/89	VOA	<5.00E+00
Benzene	50661	10/09/89	VOA	<5.00E+00
Benzene	50661B	10/09/89	VOA	<5.00E+00
Benzene	50661T	10/09/89	VOA	<5.00E+00
Benzene	50673	10/11/89	VOA	<5.00E+00
Benzene	50673B	10/11/89	VOA	<5.00E+00
Benzene	50673T	10/11/89	VOA	<5.00E+00
Benzene	50071	6/19/86	VOA	<1.00E+01
Benzene	50071B	6/19/86	VOA	<1.00E+01
Benzene	50085	7/07/86	VOA	<1.00E+01
Benzene	50085B	7/07/86	VOA	<1.00E+01
Benzene	51079	3/21/90	VOA	<5.00E+00
Benzene	51079B	3/21/90	VOA	<5.00E+00
Benzene	51079T	3/21/90	VOA	<5.00E+00
Bis(2-ethylhexyl) phthalate	50053	5/31/86	ABN	<1.00E+01
Bis(2-ethylhexyl) phthalate	50113	8/18/86	ABN	<1.00E+01
Bis(2-ethylhexyl) phthalate	50149	10/03/86	ABN	<1.00E+01
Bis(2-ethylhexyl) phthalate	50214	1/06/87	ABN	<1.00E+01
Bis(2-ethylhexyl) phthalate	50454	9/16/88	ABN	<1.00E+01
Bis(2-ethylhexyl) phthalate	50460	9/23/88	ABN	<1.00E+01
Bis(2-ethylhexyl) phthalate	50470	10/10/88	ABN	<1.00E+01

Table B-2. Total Data.
 (sheet 25 of 49)

Constituent		Sample #	Date	Method	Result
Bis(2-ethylhexyl)	phthalate	50478	10/24/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50490	11/04/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50502	12/02/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50512	12/16/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50514	12/16/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50534	2/15/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50542	3/02/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50558	3/15/89	ABN	1.20E+01
Bis(2-ethylhexyl)	phthalate	50572	3/29/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50596	4/12/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50804	11/28/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50014	9/11/85	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50456	9/16/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50462	9/23/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50468	10/10/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50476	10/24/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50488	11/04/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50498	11/18/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50500	12/02/88	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50532	2/15/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50544	3/02/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50556	3/15/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50570	3/29/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50593	4/11/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50661	10/09/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50673	10/11/89	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50071	6/19/86	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	50085	7/07/86	ABN	<1.00E+01
Bis(2-ethylhexyl)	phthalate	51079	3/21/90	ABN	<1.00E+01
Chlorobenzene		50053	5/31/86	VOA	<1.00E+01
Chlorobenzene		50113	8/18/86	VOA	<1.00E+01
Chlorobenzene		50113B	8/18/86	VOA	<1.00E+01
Chlorobenzene		50149	10/03/86	VOA	<1.00E+01
Chlorobenzene		50149B	10/03/86	VOA	<1.00E+01
Chlorobenzene		50214	1/06/87	VOA	<1.00E+01
Chlorobenzene		50214B	1/06/87	VOA	<1.00E+01
Chlorobenzene		50454	9/16/88	VOA	<1.00E+01
Chlorobenzene		50454B	9/16/88	VOA	<1.00E+01
Chlorobenzene		50460	9/23/88	VOA	<1.00E+01
Chlorobenzene		50460B	9/23/88	VOA	<1.00E+01
Chlorobenzene		50470	10/10/88	VOA	<1.00E+01
Chlorobenzene		50470B	10/10/88	VOA	<1.00E+01
Chlorobenzene		50478	10/24/88	VOA	<1.00E+01
Chlorobenzene		50478B	10/24/88	VOA	<1.00E+01
Chlorobenzene		50490	11/04/88	VOA	<1.00E+01
Chlorobenzene		50490B	11/04/88	VOA	<1.00E+01

Table B-2. Total Data.
 (sheet 26 of 49)

Constituent	Sample #	Date	Method	Result
Chlorobenzene	50502	12/02/88	VOA	<1.00E+01
Chlorobenzene	50502B	12/02/88	VOA	<1.00E+01
Chlorobenzene	50512	12/16/88	VOA	<1.00E+01
Chlorobenzene	50512B	12/16/88	VOA	<1.00E+01
Chlorobenzene	50514	12/16/88	VOA	<1.00E+01
Chlorobenzene	50514B	12/16/88	VOA	5.10E+01
Chlorobenzene	50534	2/15/89	VOA	<5.00E+00
Chlorobenzene	50534	2/15/89	ABN	<1.00E+01
Chlorobenzene	50534B	2/15/89	VOA	<5.00E+00
Chlorobenzene	50542	3/02/89	VOA	<5.00E+00
Chlorobenzene	50542	3/02/89	ABN	<1.00E+01
Chlorobenzene	50542B	3/02/89	VOA	<5.00E+00
Chlorobenzene	50558	3/15/89	VOA	<5.00E+00
Chlorobenzene	50558	3/15/89	ABN	<1.00E+01
Chlorobenzene	50558B	3/15/89	VOA	<5.00E+00
Chlorobenzene	50572	3/29/89	VOA	<5.00E+00
Chlorobenzene	50572	3/29/89	ABN	<1.00E+01
Chlorobenzene	50572B	3/29/89	VOA	<5.00E+00
Chlorobenzene	50596	4/12/89	VOA	<5.00E+00
Chlorobenzene	50596	4/12/89	ABN	<1.00E+01
Chlorobenzene	50596B	4/12/89	VOA	<5.00E+00
Chlorobenzene	50804	11/28/89	VOA	<5.00E+00
Chlorobenzene	50804	11/28/89	ABN	<1.00E+01
Chlorobenzene	50804B	11/28/89	VOA	<5.00E+00
Chlorobenzene	50804T	11/28/89	VOA	<5.00E+00
Chlorobenzene	50014	9/11/85	VOA	<1.00E+01
Chlorobenzene	50456	9/16/88	VOA	<1.00E+01
Chlorobenzene	50456B	9/16/88	VOA	<1.00E+01
Chlorobenzene	50462	9/23/88	VOA	<1.00E+01
Chlorobenzene	50462B	9/23/88	VOA	<1.00E+01
Chlorobenzene	50468	10/10/88	VOA	<1.00E+01
Chlorobenzene	50468B	10/10/88	VOA	<1.00E+01
Chlorobenzene	50476	10/24/88	VOA	<1.00E+01
Chlorobenzene	50476B	10/24/88	VOA	<1.00E+01
Chlorobenzene	50488	11/04/88	VOA	<1.00E+01
Chlorobenzene	50488B	11/04/88	VOA	<1.00E+01
Chlorobenzene	50498	11/18/88	VOA	<1.00E+01
Chlorobenzene	50498B	11/18/88	VOA	<1.00E+01
Chlorobenzene	50500	12/02/88	VOA	<1.00E+01
Chlorobenzene	50500B	12/02/88	VOA	<1.00E+01
Chlorobenzene	50532	2/15/89	VOA	<5.00E+00
Chlorobenzene	50532	2/15/89	ABN	<1.00E+01
Chlorobenzene	50532B	2/15/89	VOA	<5.00E+00
Chlorobenzene	50544	3/02/89	VOA	<5.00E+00
Chlorobenzene	50544	3/02/89	ABN	<1.00E+01
Chlorobenzene	50544B	3/02/89	VOA	<5.00E+00

Table B-2. Total Data.
 (sheet 27 of 49)

Constituent	Sample #	Date	Method	Result
Chlorobenzene	50556	3/15/89	VOA	<5.00E+00
Chlorobenzene	50556	3/15/89	ABN	<1.00E+01
Chlorobenzene	50556B	3/15/89	VOA	<5.00E+00
Chlorobenzene	50570	3/29/89	VOA	<5.00E+00
Chlorobenzene	50570	3/29/89	ABN	<1.00E+01
Chlorobenzene	50570B	3/29/89	VOA	<5.00E+00
Chlorobenzene	50593	4/11/89	VOA	<5.00E+00
Chlorobenzene	50593	4/11/89	ABN	<1.00E+01
Chlorobenzene	50593B	4/11/89	VOA	<5.00E+00
Chlorobenzene	50661	10/09/89	VOA	<5.00E+00
Chlorobenzene	50661	10/09/89	ABN	<1.00E+01
Chlorobenzene	50661B	10/09/89	VOA	<5.00E+00
Chlorobenzene	50661T	10/09/89	VOA	<5.00E+00
Chlorobenzene	50673	10/11/89	VOA	<5.00E+00
Chlorobenzene	50673	10/11/89	ABN	<1.00E+01
Chlorobenzene	50673B	10/11/89	VOA	<5.00E+00
Chlorobenzene	50673T	10/11/89	VOA	<5.00E+00
Chlorobenzene	50071	6/19/86	VOA	<1.00E+01
Chlorobenzene	50071B	6/19/86	VOA	<1.00E+01
Chlorobenzene	50085	7/07/86	VOA	<1.00E+01
Chlorobenzene	50085B	7/07/86	VOA	<1.00E+01
Chlorobenzene	51079	3/21/90	VOA	<5.00E+00
Chlorobenzene	51079	3/21/90	ABN	<1.00E+01
Chlorobenzene	51079B	3/21/90	VOA	<5.00E+00
Chlorobenzene	51079T	3/21/90	VOA	<5.00E+00
Chloroethane	50514B	12/16/88	VOA	4.20E+01
Chloroethane	50534	2/15/89	VOA	<1.00E+01
Chloroethane	50534B	2/15/89	VOA	<1.00E+01
Chloroethane	50542	3/02/89	VOA	<1.00E+01
Chloroethane	50542B	3/02/89	VOA	<1.00E+01
Chloroethane	50558	3/15/89	VOA	<1.00E+01
Chloroethane	50558B	3/15/89	VOA	<1.00E+01
Chloroethane	50572	3/29/89	VOA	<1.00E+01
Chloroethane	50572B	3/29/89	VOA	<1.00E+01
Chloroethane	50596	4/12/89	VOA	<1.00E+01
Chloroethane	50596B	4/12/89	VOA	<1.00E+01
Chloroethane	50804	11/28/89	VOA	<1.00E+01
Chloroethane	50804B	11/28/89	VOA	<1.00E+01
Chloroethane	50804T	11/28/89	VOA	<1.00E+01
Chloroethane	50532	2/15/89	VOA	<1.00E+01
Chloroethane	50532B	2/15/89	VOA	<1.00E+01
Chloroethane	50544	3/02/89	VOA	<1.00E+01
Chloroethane	50544B	3/02/89	VOA	<1.00E+01
Chloroethane	50556	3/15/89	VOA	<1.00E+01
Chloroethane	50556B	3/15/89	VOA	<1.00E+01
Chloroethane	50570	3/29/89	VOA	<1.00E+01

Table B-2. Total Data.
 (sheet 28 of 49)

Constituent	Sample #	Date	Method	Result
Chloroethane	50570B	3/29/89	VOA	<1.00E+01
Chloroethane	50593	4/11/89	VOA	<1.00E+01
Chloroethane	50593B	4/11/89	VOA	<1.00E+01
Chloroethane	50661	10/09/89	VOA	<1.00E+01
Chloroethane	50661B	10/09/89	VOA	<1.00E+01
Chloroethane	50661T	10/09/89	VOA	<1.00E+01
Chloroethane	50673	10/11/89	VOA	<1.00E+01
Chloroethane	50673B	10/11/89	VOA	<1.00E+01
Chloroethane	50673T	10/11/89	VOA	<1.00E+01
Chloroethane	51079	3/21/90	VOA	<1.00E+01
Chloroethane	51079B	3/21/90	VOA	<1.00E+01
Chloroethane	51079T	3/21/90	VOA	<1.00E+01
1,2-Dichloroethene	50053	5/31/86	VOA	<1.00E+01
1,2-Dichloroethene	50113	8/18/86	VOA	<1.00E+01
1,2-Dichloroethene	50113B	8/18/86	VOA	<1.00E+01
1,2-Dichloroethene	50149	10/03/86	VOA	<1.00E+01
1,2-Dichloroethene	50149B	10/03/86	VOA	<1.00E+01
1,2-Dichloroethene	50214	1/06/87	VOA	<1.00E+01
1,2-Dichloroethene	50214B	1/06/87	VOA	<1.00E+01
1,2-Dichloroethene	50454	9/16/88	VOA	<1.00E+01
1,2-Dichloroethene	50454B	9/16/88	VOA	<1.00E+01
1,2-Dichloroethene	50460	9/23/88	VOA	<1.00E+01
1,2-Dichloroethene	50460B	9/23/88	VOA	<1.00E+01
1,2-Dichloroethene	50470	10/10/88	VOA	<1.00E+01
1,2-Dichloroethene	50470B	10/10/88	VOA	<1.00E+01
1,2-Dichloroethene	50478	10/24/88	VOA	<1.00E+01
1,2-Dichloroethene	50478B	10/24/88	VOA	<1.00E+01
1,2-Dichloroethene	50490	11/04/88	VOA	<1.00E+01
1,2-Dichloroethene	50490B	11/04/88	VOA	<1.00E+01
1,2-Dichloroethene	50502	12/02/88	VOA	<1.00E+01
1,2-Dichloroethene	50502B	12/02/88	VOA	<1.00E+01
1,2-Dichloroethene	50512	12/16/88	VOA	<2.00E+00
1,2-Dichloroethene	50512B	12/16/88	VOA	1.60E+01
1,2-Dichloroethene	50514	12/16/88	VOA	<1.00E+01
1,2-Dichloroethene	50514B	12/16/88	VOA	<1.00E+01
1,2-Dichloroethene	50534	2/15/89	VOA	<5.00E+00
1,2-Dichloroethene	50534B	2/15/89	VOA	<5.00E+00
1,2-Dichloroethene	50542	3/02/89	VOA	<5.00E+00
1,2-Dichloroethene	50542B	3/02/89	VOA	<5.00E+00
1,2-Dichloroethene	50558	3/15/89	VOA	<5.00E+00
1,2-Dichloroethene	50558B	3/15/89	VOA	<5.00E+00
1,2-Dichloroethene	50572	3/29/89	VOA	<5.00E+00
1,2-Dichloroethene	50572B	3/29/89	VOA	<5.00E+00
1,2-Dichloroethene	50596	4/12/89	VOA	<5.00E+00
1,2-Dichloroethene	50596B	4/12/89	VOA	<5.00E+00
1,2-Dichloroethene	50804	11/28/89	VOA	<5.00E+00

Table B-2. Total Data.
 (sheet 29 of 49)

Constituent	Sample #	Date	Method	Result
1,2-Dichloroethene	50804B	11/28/89	VOA	<5.00E+00
1,2-Dichloroethene	50804T	11/28/89	VOA	<5.00E+00
1,2-Dichloroethene	50014	9/11/85	VOA	<1.00E+01
1,2-Dichloroethene	50456	9/16/88	VOA	<1.00E+01
1,2-Dichloroethene	50456B	9/16/88	VOA	<1.00E+01
1,2-Dichloroethene	50462	9/23/88	VOA	<1.00E+01
1,2-Dichloroethene	50462B	9/23/88	VOA	<1.00E+01
1,2-Dichloroethene	50468	10/10/88	VOA	<1.00E+01
1,2-Dichloroethene	50468B	10/10/88	VOA	<1.00E+01
1,2-Dichloroethene	50476	10/24/88	VOA	<1.00E+01
1,2-Dichloroethene	50476B	10/24/88	VOA	<1.00E+01
1,2-Dichloroethene	50488	11/04/88	VOA	<1.00E+01
1,2-Dichloroethene	50488B	11/04/88	VOA	<1.00E+01
1,2-Dichloroethene	50498	11/18/88	VOA	<1.00E+01
1,2-Dichloroethene	50498B	11/18/88	VOA	<1.00E+01
1,2-Dichloroethene	50500	12/02/88	VOA	<1.00E+01
1,2-Dichloroethene	50500B	12/02/88	VOA	<1.00E+01
1,2-Dichloroethene	50532	2/15/89	VOA	<5.00E+00
1,2-Dichloroethene	50532B	2/15/89	VOA	<5.00E+00
1,2-Dichloroethene	50544	3/02/89	VOA	<5.00E+00
1,2-Dichloroethene	50544B	3/02/89	VOA	<5.00E+00
1,2-Dichloroethene	50556	3/15/89	VOA	<5.00E+00
1,2-Dichloroethene	50556B	3/15/89	VOA	<5.00E+00
1,2-Dichloroethene	50570	3/29/89	VOA	<5.00E+00
1,2-Dichloroethene	50570B	3/29/89	VOA	<5.00E+00
1,2-Dichloroethene	50593	4/11/89	VOA	<5.00E+00
1,2-Dichloroethene	50593B	4/11/89	VOA	<5.00E+00
1,2-Dichloroethene	50661	10/09/89	VOA	<5.00E+00
1,2-Dichloroethene	50661B	10/09/89	VOA	<5.00E+00
1,2-Dichloroethene	50661T	10/09/89	VOA	<5.00E+00
1,2-Dichloroethene	50673	10/11/89	VOA	<5.00E+00
1,2-Dichloroethene	50673B	10/11/89	VOA	<5.00E+00
1,2-Dichloroethene	50673T	10/11/89	VOA	<5.00E+00
1,2-Dichloroethene	50071	6/19/86	VOA	<1.00E+01
1,2-Dichloroethene	50071B	6/19/86	VOA	<1.00E+01
1,2-Dichloroethene	50085	7/07/86	VOA	<1.00E+01
1,2-Dichloroethene	50085B	7/07/86	VOA	<1.00E+01
1,2-Dichloroethene	51079	3/21/90	VOA	<5.00E+00
1,2-Dichloroethene	51079B	3/21/90	VOA	<5.00E+00
1,2-Dichloroethene	51079T	3/21/90	VOA	<5.00E+00
Dichloromethane	50053	5/31/86	VOA	<1.00E+01
Dichloromethane	50113	8/18/86	VOA	<1.00E+01
Dichloromethane	50113B	8/18/86	VOA	<1.00E+01
Dichloromethane	50149	10/03/86	VOA	<1.00E+01
Dichloromethane	50149B	10/03/86	VOA	1.10E+02
Dichloromethane	50214	1/06/87	VOA	<1.00E+01

Table B-2. Total Data.
 (sheet 30 of 49)

Constituent	Sample #	Date	Method	Result
Dichloromethane	50214B	1/06/87	VOA	4.40E+01
Dichloromethane	50454	9/16/88	VOA	<1.00E+01
Dichloromethane	50454B	9/16/88	VOA	<1.00E+01
Dichloromethane	50460	9/23/88	VOA	<1.00E+01
Dichloromethane	50460B	9/23/88	VOA	<1.00E+01
Dichloromethane	50470	10/10/88	VOA	<1.00E+01
Dichloromethane	50470B	10/10/88	VOA	<1.00E+01
Dichloromethane	50478	10/24/88	VOA	<1.00E+01
Dichloromethane	50478B	10/24/88	VOA	<1.00E+01
Dichloromethane	50490	11/04/88	VOA	<1.00E+01
Dichloromethane	50490B	11/04/88	VOA	<1.00E+01
Dichloromethane	50502	12/02/88	VOA	<1.00E+01
Dichloromethane	50502B	12/02/88	VOA	<1.00E+01
Dichloromethane	50512	12/16/88	VOA	<1.00E+01
Dichloromethane	50512B	12/16/88	VOA	<1.00E+01
Dichloromethane	50514	12/16/88	VOA	<1.00E+01
Dichloromethane	50514B	12/16/88	VOA	<1.00E+01
Dichloromethane	50534	2/15/89	VOA	<5.00E+00
Dichloromethane	50534B	2/15/89	VOA	<5.00E+00
Dichloromethane	50542	3/02/89	VOA	<5.00E+00
Dichloromethane	50542B	3/02/89	VOA	<5.00E+00
Dichloromethane	50558	3/15/89	VOA	<5.00E+00
Dichloromethane	50558B	3/15/89	VOA	<5.00E+00
Dichloromethane	50572	3/29/89	VOA	<5.00E+00
Dichloromethane	50572B	3/29/89	VOA	<5.00E+00
Dichloromethane	50596	4/12/89	VOA	<5.00E+00
Dichloromethane	50596B	4/12/89	VOA	<5.00E+00
Dichloromethane	50804	11/28/89	VOA	<5.00E+00
Dichloromethane	50804B	11/28/89	VOA	7.00E+00
Dichloromethane	50804T	11/28/89	VOA	6.00E+00
Dichloromethane	50014	9/11/85	VOA	<1.00E+01
Dichloromethane	50456	9/16/88	VOA	<1.00E+01
Dichloromethane	50456B	9/16/88	VOA	<1.00E+01
Dichloromethane	50462	9/23/88	VOA	<1.00E+01
Dichloromethane	50462B	9/23/88	VOA	<1.00E+01
Dichloromethane	50468	10/10/88	VOA	<1.00E+01
Dichloromethane	50468B	10/10/88	VOA	<1.00E+01
Dichloromethane	50476	10/24/88	VOA	<1.00E+01
Dichloromethane	50476B	10/24/88	VOA	<1.00E+01
Dichloromethane	50488	11/04/88	VOA	<1.00E+01
Dichloromethane	50488B	11/04/88	VOA	<1.00E+01
Dichloromethane	50498	11/18/88	VOA	<1.00E+01
Dichloromethane	50498B	11/18/88	VOA	<1.00E+01
Dichloromethane	50500	12/02/88	VOA	<1.00E+01
Dichloromethane	50500B	12/02/88	VOA	<1.00E+01
Dichloromethane	50532	2/15/89	VOA	<4.00E+00

Table B-2. Total Data.
 (sheet 31 of 49)

Constituent	Sample #	Date	Method	Result
Dichloromethane	50532B	2/15/89	VOA	<5.00E+00
Dichloromethane	50544	3/02/89	VOA	<5.00E+00
Dichloromethane	50544B	3/02/89	VOA	<5.00E+00
Dichloromethane	50556	3/15/89	VOA	<5.00E+00
Dichloromethane	50556B	3/15/89	VOA	<5.00E+00
Dichloromethane	50570	3/29/89	VOA	<5.00E+00
Dichloromethane	50570B	3/29/89	VOA	<5.00E+00
Dichloromethane	50593	4/11/89	VOA	<5.00E+00
Dichloromethane	50593B	4/11/89	VOA	1.00E+01
Dichloromethane	50661	10/09/89	VOA	<5.00E+00
Dichloromethane	50661B	10/09/89	VOA	6.00E+02
Dichloromethane	50661T	10/09/89	VOA	6.30E+02
Dichloromethane	50673	10/11/89	VOA	<5.00E+00
Dichloromethane	50673B	10/11/89	VOA	4.70E+02
Dichloromethane	50673T	10/11/89	VOA	4.90E+02
Dichloromethane	50071	6/19/86	VOA	<1.00E+01
Dichloromethane	50071B	6/19/86	VOA	1.90E+02
Dichloromethane	50085	7/07/86	VOA	<1.00E+01
Dichloromethane	50085B	7/07/86	VOA	1.80E+02
Dichloromethane	51079	3/21/90	VOA	<5.00E+00
Dichloromethane	51079B	3/21/90	VOA	<5.00E+00
Dichloromethane	51079T	3/21/90	VOA	<5.00E+00
2,3-Dimethylbutane	50512B	12/16/88	VOA	1.30E+02
Ethanol	50514	12/16/88	VOA	4.00E+00
Ethanol	50534	2/15/89	DIGC	<1.00E+04
Ethanol	50542	3/02/89	DIGC	<1.00E+04
Ethanol	50558	3/15/89	DIGC	<1.00E+04
Ethanol	50572	3/29/89	DIGC	<1.00E+04
Ethanol	50596	4/12/89	DIGC	<1.00E+04
Ethanol	50804	11/28/89	DIGC	<1.00E+04
Ethanol	50532	2/15/89	DIGC	<1.00E+04
Ethanol	50544	3/02/89	DIGC	<1.00E+04
Ethanol	50556	3/15/89	DIGC	<1.00E+04
Ethanol	50570	3/29/89	DIGC	<1.00E+04
Ethanol	50593	4/11/89	DIGC	<1.00E+04
Ethanol	50661	10/09/89	DIGC	<1.00E+04
Ethanol	50673	10/11/89	DIGC	<1.00E+04
Ethanol	51079	3/21/90	DIGC	<1.00E+04
Ethylbenzene	50512	12/16/88	VOA	3.00E+00
Ethylbenzene	50534	2/15/89	VOA	<5.00E+00
Ethylbenzene	50534B	2/15/89	VOA	<5.00E+00
Ethylbenzene	50542	3/02/89	VOA	<5.00E+00
Ethylbenzene	50542B	3/02/89	VOA	<5.00E+00
Ethylbenzene	50558	3/15/89	VOA	<5.00E+00
Ethylbenzene	50558B	3/15/89	VOA	<5.00E+00
Ethylbenzene	50572	3/29/89	VOA	<5.00E+00

Table B-2. Total Data.
 (sheet 32 of 49)

Constituent	Sample #	Date	Method	Result
Ethylbenzene	50572B	3/29/89	VOA	<5.00E+00
Ethylbenzene	50596	4/12/89	VOA	<5.00E+00
Ethylbenzene	50596B	4/12/89	VOA	<5.00E+00
Ethylbenzene	50804	11/28/89	VOA	<5.00E+00
Ethylbenzene	50804B	11/28/89	VOA	<5.00E+00
Ethylbenzene	50804T	11/28/89	VOA	<5.00E+00
Ethylbenzene	50532	2/15/89	VOA	<5.00E+00
Ethylbenzene	50532B	2/15/89	VOA	<5.00E+00
Ethylbenzene	50544	3/02/89	VOA	<5.00E+00
Ethylbenzene	50544B	3/02/89	VOA	<5.00E+00
Ethylbenzene	50556	3/15/89	VOA	<5.00E+00
Ethylbenzene	50556B	3/15/89	VOA	<5.00E+00
Ethylbenzene	50570	3/29/89	VOA	<5.00E+00
Ethylbenzene	50570B	3/29/89	VOA	<5.00E+00
Ethylbenzene	50593	4/11/89	VOA	<5.00E+00
Ethylbenzene	50593B	4/11/89	VOA	<5.00E+00
Ethylbenzene	50661	10/09/89	VOA	<5.00E+00
Ethylbenzene	50661B	10/09/89	VOA	<5.00E+00
Ethylbenzene	50661T	10/09/89	VOA	<5.00E+00
Ethylbenzene	50673	10/11/89	VOA	<5.00E+00
Ethylbenzene	50673B	10/11/89	VOA	<5.00E+00
Ethylbenzene	50673T	10/11/89	VOA	<5.00E+00
Ethylbenzene	51079	3/21/90	VOA	<5.00E+00
Ethylbenzene	51079B	3/21/90	VOA	<5.00E+00
Ethylbenzene	51079T	3/21/90	VOA	<5.00E+00
2-Hexanone	50512B	12/16/88	VOA	1.00E+01
2-Hexanone	50534	2/15/89	VOA	<5.00E+01
2-Hexanone	50534B	2/15/89	VOA	<5.00E+01
2-Hexanone	50542	3/02/89	VOA	<5.00E+01
2-Hexanone	50542B	3/02/89	VOA	<5.00E+01
2-Hexanone	50558	3/15/89	VOA	<5.00E+01
2-Hexanone	50558B	3/15/89	VOA	<5.00E+01
2-Hexanone	50572	3/29/89	VOA	<5.00E+01
2-Hexanone	50572B	3/29/89	VOA	<5.00E+01
2-Hexanone	50596	4/12/89	VOA	<5.00E+01
2-Hexanone	50596B	4/12/89	VOA	<5.00E+01
2-Hexanone	50804	11/28/89	VOA	<5.00E+01
2-Hexanone	50804B	11/28/89	VOA	<5.00E+01
2-Hexanone	50804T	11/28/89	VOA	<5.00E+01
2-Hexanone	50532	2/15/89	VOA	<5.00E+01
2-Hexanone	50532B	2/15/89	VOA	<5.00E+01
2-Hexanone	50544	3/02/89	VOA	<5.00E+01
2-Hexanone	50544B	3/02/89	VOA	<5.00E+01
2-Hexanone	50556	3/15/89	VOA	<5.00E+01
2-Hexanone	50556B	3/15/89	VOA	<5.00E+01
2-Hexanone	50570	3/29/89	VOA	<5.00E+01

Table B-2. Total Data.
 (sheet 33 of 49)

Constituent	Sample #	Date	Method	Result
2-Hexanone	50570B	3/29/89	VOA	<5.00E+01
2-Hexanone	50593	4/11/89	VOA	<5.00E+01
2-Hexanone	50593B	4/11/89	VOA	<5.00E+01
2-Hexanone	50661	10/09/89	VOA	<5.00E+01
2-Hexanone	50661B	10/09/89	VOA	<5.00E+01
2-Hexanone	50661T	10/09/89	VOA	<5.00E+01
2-Hexanone	50673	10/11/89	VOA	<5.00E+01
2-Hexanone	50673B	10/11/89	VOA	<5.00E+01
2-Hexanone	50673T	10/11/89	VOA	<5.00E+01
2-Hexanone	51079	3/21/90	VOA	<5.00E+01
2-Hexanone	51079B	3/21/90	VOA	<5.00E+01
2-Hexanone	51079T	3/21/90	VOA	<5.00E+01
Methylcyclopentane	50512B	12/16/88	VOA	5.00E+00
MIBK (Hexone)	50454	9/16/88	VOA	<1.00E+01
MIBK (Hexone)	50454B	9/16/88	VOA	<1.00E+01
MIBK (Hexone)	50460	9/23/88	VOA	<1.00E+01
MIBK (Hexone)	50460B	9/23/88	VOA	<1.00E+01
MIBK (Hexone)	50470	10/10/88	VOA	<1.00E+01
MIBK (Hexone)	50470B	10/10/88	VOA	<1.00E+01
MIBK (Hexone)	50478	10/24/88	VOA	<1.00E+01
MIBK (Hexone)	50478B	10/24/88	VOA	<1.00E+01
MIBK (Hexone)	50490	11/04/88	VOA	<1.00E+01
MIBK (Hexone)	50490B	11/04/88	VOA	<1.00E+01
MIBK (Hexone)	50502	12/02/88	VOA	<1.00E+01
MIBK (Hexone)	50502B	12/02/88	VOA	<1.00E+01
MIBK (Hexone)	50512	12/16/88	VOA	<1.00E+01
MIBK (Hexone)	50512	12/16/88	VOA	4.00E+00
MIBK (Hexone)	50512B	12/16/88	VOA	<1.00E+01
MIBK (Hexone)	50512B	12/16/88	VOA	6.50E+01
MIBK (Hexone)	50514	12/16/88	VOA	<1.00E+01
MIBK (Hexone)	50514B	12/16/88	VOA	<1.00E+01
MIBK (Hexone)	50534	2/15/89	VOA	<1.00E+01
MIBK (Hexone)	50534B	2/15/89	VOA	<1.00E+01
MIBK (Hexone)	50542	3/02/89	VOA	<1.00E+01
MIBK (Hexone)	50542B	3/02/89	VOA	<1.00E+01
MIBK (Hexone)	50558	3/15/89	VOA	<1.00E+01
MIBK (Hexone)	50558B	3/15/89	VOA	<1.00E+01
MIBK (Hexone)	50572	3/29/89	VOA	<1.00E+01
MIBK (Hexone)	50572B	3/29/89	VOA	<1.00E+01
MIBK (Hexone)	50596	4/12/89	VOA	<1.00E+01
MIBK (Hexone)	50596B	4/12/89	VOA	<1.00E+01
MIBK (Hexone)	50804	11/28/89	VOA	<1.00E+01
MIBK (Hexone)	50804B	11/28/89	VOA	<1.00E+01
MIBK (Hexone)	50804T	11/28/89	VOA	<1.00E+01
MIBK (Hexone)	50456	9/16/88	VOA	<1.00E+01
MIBK (Hexone)	50456B	9/16/88	VOA	<1.00E+01

Table B-2. Total Data.
 (sheet 34 of 49)

Constituent	Sample #	Date	Method	Result
MIBK (Hexone)	50462	9/23/88	VOA	<1.00E+01
MIBK (Hexone)	50462B	9/23/88	VOA	<1.00E+01
MIBK (Hexone)	50468	10/10/88	VOA	<1.00E+01
MIBK (Hexone)	50468B	10/10/88	VOA	<1.00E+01
MIBK (Hexone)	50476	10/24/88	VOA	<1.00E+01
MIBK (Hexone)	50476B	10/24/88	VOA	<1.00E+01
MIBK (Hexone)	50488	11/04/88	VOA	<1.00E+01
MIBK (Hexone)	50488B	11/04/88	VOA	<1.00E+01
MIBK (Hexone)	50498	11/18/88	VOA	<1.00E+01
MIBK (Hexone)	50498B	11/18/88	VOA	<1.00E+01
MIBK (Hexone)	50500	12/02/88	VOA	<1.00E+01
MIBK (Hexone)	50500B	12/02/88	VOA	<1.00E+01
MIBK (Hexone)	50532	2/15/89	VOA	<1.00E+01
MIBK (Hexone)	50532B	2/15/89	VOA	<1.00E+01
MIBK (Hexone)	50544	3/02/89	VOA	<1.00E+01
MIBK (Hexone)	50544B	3/02/89	VOA	<1.00E+01
MIBK (Hexone)	50556	3/15/89	VOA	<1.00E+01
MIBK (Hexone)	50556B	3/15/89	VOA	<1.00E+01
MIBK (Hexone)	50570	3/29/89	VOA	<1.00E+01
MIBK (Hexone)	50570B	3/29/89	VOA	<1.00E+01
MIBK (Hexone)	50593	4/11/89	VOA	<1.00E+01
MIBK (Hexone)	50593B	4/11/89	VOA	<1.00E+01
MIBK (Hexone)	50661	10/09/89	VOA	<1.00E+01
MIBK (Hexone)	50661B	10/09/89	VOA	<1.00E+01
MIBK (Hexone)	50661T	10/09/89	VOA	<1.00E+01
MIBK (Hexone)	50673	10/11/89	VOA	<1.00E+01
MIBK (Hexone)	50673B	10/11/89	VOA	<1.00E+01
MIBK (Hexone)	50673T	10/11/89	VOA	<1.00E+01
MIBK (Hexone)	51079	3/21/90	VOA	<1.00E+01
MIBK (Hexone)	51079B	3/21/90	VOA	<1.00E+01
MIBK (Hexone)	51079T	3/21/90	VOA	<1.00E+01
Pentane	50512B	12/16/88	VOA	1.00E+01
Tetrahydrofuran	50514B	12/16/88	VOA	3.60E+01
Tetrahydrofuran	50534	2/15/89	VOA	<1.00E+01
Tetrahydrofuran	50534B	2/15/89	VOA	<1.00E+01
Tetrahydrofuran	50542	3/02/89	VOA	<1.00E+01
Tetrahydrofuran	50542B	3/02/89	VOA	<1.00E+01
Tetrahydrofuran	50558	3/15/89	VOA	<1.00E+01
Tetrahydrofuran	50558B	3/15/89	VOA	<1.00E+01
Tetrahydrofuran	50572	3/29/89	VOA	<1.00E+01
Tetrahydrofuran	50572B	3/29/89	VOA	<1.00E+01
Tetrahydrofuran	50596	4/12/89	VOA	<1.00E+01
Tetrahydrofuran	50596B	4/12/89	VOA	<1.00E+01
Tetrahydrofuran	50804	11/28/89	VOA	<1.00E+01
Tetrahydrofuran	50804B	11/28/89	VOA	<6.00E+00
Tetrahydrofuran	50804T	11/28/89	VOA	<5.00E+00

Table B-2. Total Data.
 (sheet 35 of 49)

Constituent	Sample #	Date	Method	Result
Tetrahydrofuran	50532	2/15/89	VOA	<1.00E+01
Tetrahydrofuran	50532B	2/15/89	VOA	<1.00E+01
Tetrahydrofuran	50544	3/02/89	VOA	<1.00E+01
Tetrahydrofuran	50544B	3/02/89	VOA	<1.00E+01
Tetrahydrofuran	50556	3/15/89	VOA	<1.00E+01
Tetrahydrofuran	50556B	3/15/89	VOA	<1.00E+01
Tetrahydrofuran	50570	3/29/89	VOA	<1.00E+01
Tetrahydrofuran	50570B	3/29/89	VOA	<1.00E+01
Tetrahydrofuran	50593	4/11/89	VOA	<1.00E+01
Tetrahydrofuran	50593B	4/11/89	VOA	<1.00E+01
Tetrahydrofuran	50661	10/09/89	VOA	<1.00E+01
Tetrahydrofuran	50661B	10/09/89	VOA	<1.00E+01
Tetrahydrofuran	50661T	10/09/89	VOA	<1.00E+01
Tetrahydrofuran	50673	10/11/89	VOA	<1.00E+01
Tetrahydrofuran	50673B	10/11/89	VOA	<1.00E+01
Tetrahydrofuran	50673T	10/11/89	VOA	<1.00E+01
Tetrahydrofuran	51079	3/21/90	VOA	<1.00E+01
Tetrahydrofuran	51079B	3/21/90	VOA	1.00E+01
Tetrahydrofuran	51079T	3/21/90	VOA	1.00E+01
Trichloromethane	50053	5/31/86	VOA	<1.00E+01
Trichloromethane	50113	8/18/86	VOA	3.10E+01
Trichloromethane	50113B	8/18/86	VOA	<1.00E+01
Trichloromethane	50149	10/03/86	VOA	1.10E+01
Trichloromethane	50149B	10/03/86	VOA	<1.00E+01
Trichloromethane	50214	1/06/87	VOA	1.20E+01
Trichloromethane	50214B	1/06/87	VOA	<1.00E+01
Trichloromethane	50454	9/16/88	VOA	1.40E+01
Trichloromethane	50454B	9/16/88	VOA	<5.00E+00
Trichloromethane	50460	9/23/88	VOA	1.70E+01
Trichloromethane	50460B	9/23/88	VOA	<5.00E+00
Trichloromethane	50470	10/10/88	VOA	1.20E+01
Trichloromethane	50470B	10/10/88	VOA	<5.00E+00
Trichloromethane	50478	10/24/88	VOA	8.00E+00
Trichloromethane	50478B	10/24/88	VOA	<5.00E+00
Trichloromethane	50490	11/04/88	VOA	8.00E+00
Trichloromethane	50490B	11/04/88	VOA	<5.00E+00
Trichloromethane	50502	12/02/88	VOA	6.00E+00
Trichloromethane	50502B	12/02/88	VOA	<5.00E+00
Trichloromethane	50512	12/16/88	VOA	<5.00E+00
Trichloromethane	50512B	12/16/88	VOA	<5.00E+00
Trichloromethane	50514	12/16/88	VOA	7.00E+00
Trichloromethane	50514B	12/16/88	VOA	<5.00E+00
Trichloromethane	50534	2/15/89	VOA	5.00E+00
Trichloromethane	50534B	2/15/89	VOA	<5.00E+00
Trichloromethane	50542	3/02/89	VOA	6.00E+00
Trichloromethane	50542B	3/02/89	VOA	<5.00E+00

Table B-2. Total Data.
 (sheet 36 of 49)

Constituent	Sample #	Date	Method	Result
Trichloromethane	50558	3/15/89	VOA	6.00E+00
Trichloromethane	50558B	3/15/89	VOA	<5.00E+00
Trichloromethane	50572	3/29/89	VOA	8.00E+00
Trichloromethane	50572B	3/29/89	VOA	<5.00E+00
Trichloromethane	50596	4/12/89	VOA	9.00E+00
Trichloromethane	50596B	4/12/89	VOA	<5.00E+00
Trichloromethane	50804	11/28/89	VOA	2.10E+01
Trichloromethane	50804B	11/28/89	VOA	1.00E+01
Trichloromethane	50804T	11/28/89	VOA	9.00E+00
Trichloromethane	50014	9/11/85	VOA	<1.00E+01
Trichloromethane	50456	9/16/88	VOA	1.20E+01
Trichloromethane	50456B	9/16/88	VOA	<5.00E+00
Trichloromethane	50462	9/23/88	VOA	1.50E+01
Trichloromethane	50462B	9/23/88	VOA	<5.00E+00
Trichloromethane	50468	10/10/88	VOA	1.30E+01
Trichloromethane	50468B	10/10/88	VOA	<5.00E+00
Trichloromethane	50476	10/24/88	VOA	8.00E+00
Trichloromethane	50476B	10/24/88	VOA	<5.00E+00
Trichloromethane	50488	11/04/88	VOA	1.00E+01
Trichloromethane	50488B	11/04/88	VOA	<5.00E+00
Trichloromethane	50498	11/18/88	VOA	1.20E+01
Trichloromethane	50498B	11/18/88	VOA	<5.00E+00
Trichloromethane	50500	12/02/88	VOA	8.00E+00
Trichloromethane	50500B	12/02/88	VOA	<5.00E+00
Trichloromethane	50532	2/15/89	VOA	<5.00E+00
Trichloromethane	50532B	2/15/89	VOA	<5.00E+00
Trichloromethane	50544	3/02/89	VOA	5.00E+00
Trichloromethane	50544B	3/02/89	VOA	<5.00E+00
Trichloromethane	50556	3/15/89	VOA	7.00E+00
Trichloromethane	50556B	3/15/89	VOA	<5.00E+00
Trichloromethane	50570	3/29/89	VOA	9.00E+00
Trichloromethane	50570B	3/29/89	VOA	<5.00E+00
Trichloromethane	50593	4/11/89	VOA	1.00E+01
Trichloromethane	50593B	4/11/89	VOA	<5.00E+00
Trichloromethane	50661	10/09/89	VOA	2.50E+01
Trichloromethane	50661B	10/09/89	VOA	<5.00E+00
Trichloromethane	50661T	10/09/89	VOA	<5.00E+00
Trichloromethane	50673	10/11/89	VOA	2.00E+01
Trichloromethane	50673B	10/11/89	VOA	<5.00E+00
Trichloromethane	50673T	10/11/89	VOA	<5.00E+00
Trichloromethane	50071	6/19/86	VOA	<1.00E+01
Trichloromethane	50071B	6/19/86	VOA	<1.00E+01
Trichloromethane	50085	7/07/86	VOA	<1.00E+01
Trichloromethane	50085B	7/07/86	VOA	<1.00E+01
Trichloromethane	51079	3/21/90	VOA	1.30E+01
Trichloromethane	51079B	3/21/90	VOA	<4.00E+00

Table B-2. Total Data.
 (sheet 37 of 49)

Constituent	Sample #	Date	Method	Result
Trichloromethane	51079T	3/21/90	VOA	<4.00E+00
Unknown	50478	10/24/88	VOA	3.00E+01
Unknown	50512	12/16/88	VOA	1.00E+00
Unknown	50514B	12/16/88	VOA	1.80E+01
Unknown	50596	4/12/89	ABN	4.60E+01
Unknown aliphatic HC	50512	12/16/88	VOA	9.00E+00
Unknown aliphatic HC	50512B	12/16/88	VOA	8.00E+00
Unknown aliphatic HC	50514	12/16/88	VOA	9.00E+00
Unknown aliphatic HC	50514B	12/16/88	VOA	7.00E+00
Unknown amide	50804	11/28/89	ABN	2.60E+01
1,4-Xylene & 1,2-Xylene	50053	5/31/86	VOA	<1.00E+01
1,4-Xylene & 1,2-Xylene	50113	8/18/86	VOA	<1.00E+01
1,4-Xylene & 1,2-Xylene	50113B	8/18/86	VOA	<1.00E+01
1,4-Xylene & 1,2-Xylene	50149	10/03/86	VOA	<1.00E+01
1,4-Xylene & 1,2-Xylene	50149B	10/03/86	VOA	<1.00E+01
1,4-Xylene & 1,2-Xylene	50214	1/06/87	VOA	1.70E+01
1,4-Xylene & 1,2-Xylene	50214B	1/06/87	VOA	<1.00E+01
1,4-Xylene & 1,2-Xylene	50454	9/16/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50454B	9/16/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50460	9/23/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50460B	9/23/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50470	10/10/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50470B	10/10/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50478	10/24/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50478B	10/24/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50490	11/04/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50490B	11/04/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50502	12/02/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50502B	12/02/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50512	12/16/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50512B	12/16/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50514	12/16/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50514B	12/16/88	VOA	<3.00E+00
1,4-Xylene & 1,2-Xylene	50534	2/15/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50534B	2/15/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50542	3/02/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50542B	3/02/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50558	3/15/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50558B	3/15/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50572	3/29/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50572B	3/29/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50596	4/12/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50596B	4/12/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50804	11/28/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50804B	11/28/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50804T	11/28/89	VOA	<5.00E+00

Table B-2. Total Data.
 (sheet 38 of 49)

Constituent	Sample #	Date	Method	Result
1,4-Xylene & 1,2-Xylene	50014	9/11/85	VOA	<1.00E+01
1,4-Xylene & 1,2-Xylene	50456	9/16/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50456B	9/16/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50462	9/23/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50462B	9/23/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50468	10/10/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50468B	10/10/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50476	10/24/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50476B	10/24/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50488	11/04/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50488B	11/04/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50498	11/18/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50498B	11/18/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50500	12/02/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50500B	12/02/88	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50532	2/15/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50532B	2/15/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50544	3/02/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50544B	3/02/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50556	3/15/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50556B	3/15/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50570	3/29/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50570B	3/29/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50593	4/11/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50593B	4/11/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50661	10/09/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50661B	10/09/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50661T	10/09/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50673	10/11/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50673B	10/11/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50673T	10/11/89	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	50071	6/19/86	VOA	<1.00E+01
1,4-Xylene & 1,2-Xylene	50071B	6/19/86	VOA	<1.00E+01
1,4-Xylene & 1,2-Xylene	50085	7/07/86	VOA	<1.00E+01
1,4-Xylene & 1,2-Xylene	50085B	7/07/86	VOA	<1.00E+01
1,4-Xylene & 1,2-Xylene	51079	3/21/90	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	51079B	3/21/90	VOA	<5.00E+00
1,4-Xylene & 1,2-Xylene	51079T	3/21/90	VOA	<5.00E+00
1,3-Xylene	50053	5/31/86	VOA	<1.00E+01
1,3-Xylene	50113	8/18/86	VOA	<1.00E+01
1,3-Xylene	50113B	8/18/86	VOA	<1.00E+01
1,3-Xylene	50149	10/03/86	VOA	<1.00E+01
1,3-Xylene	50149B	10/03/86	VOA	<1.00E+01
1,3-Xylene	50214	1/06/87	VOA	<1.00E+01
1,3-Xylene	50214B	1/06/87	VOA	<1.00E+01
1,3-Xylene	50454	9/16/88	VOA	<5.00E+00

Table B-2. Total Data.
 (sheet 39 of 49)

Constituent	Sample #	Date	Method	Result
1,3-Xylene	50454B	9/16/88	VOA	<5.00E+00
1,3-Xylene	50460	9/23/88	VOA	<5.00E+00
1,3-Xylene	50460B	9/23/88	VOA	<5.00E+00
1,3-Xylene	50470	10/10/88	VOA	<5.00E+00
1,3-Xylene	50470B	10/10/88	VOA	<5.00E+00
1,3-Xylene	50478	10/24/88	VOA	<5.00E+00
1,3-Xylene	50478B	10/24/88	VOA	<5.00E+00
1,3-Xylene	50490	11/04/88	VOA	<5.00E+00
1,3-Xylene	50490B	11/04/88	VOA	<5.00E+00
1,3-Xylene	50502	12/02/88	VOA	<5.00E+00
1,3-Xylene	50502B	12/02/88	VOA	<5.00E+00
1,3-Xylene	50512	12/16/88	VOA	5.00E+00
1,3-Xylene	50512B	12/16/88	VOA	<5.00E+00
1,3-Xylene	50514	12/16/88	VOA	<5.00E+00
1,3-Xylene	50514B	12/16/88	VOA	5.00E+00
1,3-Xylene	50534	2/15/89	VOA	<5.00E+00
1,3-Xylene	50534B	2/15/89	VOA	<5.00E+00
1,3-Xylene	50542	3/02/89	VOA	<5.00E+00
1,3-Xylene	50542B	3/02/89	VOA	<5.00E+00
1,3-Xylene	50558	3/15/89	VOA	<5.00E+00
1,3-Xylene	50558B	3/15/89	VOA	<5.00E+00
1,3-Xylene	50572	3/29/89	VOA	<5.00E+00
1,3-Xylene	50572B	3/29/89	VOA	<5.00E+00
1,3-Xylene	50596	4/12/89	VOA	<5.00E+00
1,3-Xylene	50596B	4/12/89	VOA	<5.00E+00
1,3-Xylene	50804	11/28/89	VOA	<5.00E+00
1,3-Xylene	50804B	11/28/89	VOA	<5.00E+00
1,3-Xylene	50804T	11/28/89	VOA	<5.00E+00
1,3-Xylene	50014	9/11/85	VOA	<1.00E+01
1,3-Xylene	50456	9/16/88	VOA	<5.00E+00
1,3-Xylene	50456B	9/16/88	VOA	<5.00E+00
1,3-Xylene	50462	9/23/88	VOA	<5.00E+00
1,3-Xylene	50462B	9/23/88	VOA	<5.00E+00
1,3-Xylene	50468	10/10/88	VOA	<5.00E+00
1,3-Xylene	50468B	10/10/88	VOA	<5.00E+00
1,3-Xylene	50476	10/24/88	VOA	<5.00E+00
1,3-Xylene	50476B	10/24/88	VOA	<5.00E+00
1,3-Xylene	50488	11/04/88	VOA	<5.00E+00
1,3-Xylene	50488B	11/04/88	VOA	<5.00E+00
1,3-Xylene	50498	11/18/88	VOA	<5.00E+00
1,3-Xylene	50498B	11/18/88	VOA	<5.00E+00
1,3-Xylene	50500	12/02/88	VOA	<5.00E+00
1,3-Xylene	50500B	12/02/88	VOA	<5.00E+00
1,3-Xylene	50532	2/15/89	VOA	<5.00E+00
1,3-Xylene	50532B	2/15/89	VOA	<5.00E+00
1,3-Xylene	50544	3/02/89	VOA	<5.00E+00

Table B-2. Total Data.
 (sheet 40 of 49)

Constituent	Sample #	Date	Method	Result
1,3-Xylene	50544B	3/02/89	VOA	<5.00E+00
1,3-Xylene	50556	3/15/89	VOA	<5.00E+00
1,3-Xylene	50556B	3/15/89	VOA	<5.00E+00
1,3-Xylene	50570	3/29/89	VOA	<5.00E+00
1,3-Xylene	50570B	3/29/89	VOA	<5.00E+00
1,3-Xylene	50593	4/11/89	VOA	<5.00E+00
1,3-Xylene	50593B	4/11/89	VOA	<5.00E+00
1,3-Xylene	50661	10/09/89	VOA	<5.00E+00
1,3-Xylene	50661B	10/09/89	VOA	<5.00E+00
1,3-Xylene	50661T	10/09/89	VOA	<5.00E+00
1,3-Xylene	50673	10/11/89	VOA	<5.00E+00
1,3-Xylene	50673B	10/11/89	VOA	<5.00E+00
1,3-Xylene	50673T	10/11/89	VOA	<5.00E+00
1,3-Xylene	50071	6/19/86	VOA	<1.00E+01
1,3-Xylene	50071B	6/19/86	VOA	<1.00E+01
1,3-Xylene	50085	7/07/86	VOA	<1.00E+01
1,3-Xylene	50085B	7/07/86	VOA	<1.00E+01
1,3-Xylene	51079	3/21/90	VOA	<5.00E+00
1,3-Xylene	51079B	3/21/90	VOA	<5.00E+00
1,3-Xylene	51079T	3/21/90	VOA	<5.00E+00
Alkalinity (Method B)	50804	11/28/89	TITRA	4.40E+04
Alkalinity (Method B)	50661	10/09/89	TITRA	4.70E+04
Alkalinity (Method B)	50673	10/11/89	TITRA	5.30E+04
Alkalinity (Method B)	51079	3/21/90	TITRA	4.60E+04
Alpha Activity (pCi/L)	50053	5/31/86	Alpha	1.09E+00
Alpha Activity (pCi/L)	50113	8/18/86	Alpha	1.81E+00
Alpha Activity (pCi/L)	50149	10/03/86	Alpha	8.76E+00
Alpha Activity (pCi/L)	50214	1/06/87	Alpha	7.91E-01
Alpha Activity (pCi/L)	50454	9/16/88	Alpha	8.72E-01
Alpha Activity (pCi/L)	50470	10/10/88	Alpha	1.91E+00
Alpha Activity (pCi/L)	50478	10/24/88	Alpha	<6.40E-01
Alpha Activity (pCi/L)	50490	11/04/88	Alpha	<6.31E-01
Alpha Activity (pCi/L)	50512	12/16/88	Alpha	<5.27E-01
Alpha Activity (pCi/L)	50514	12/16/88	Alpha	9.57E-01
Alpha Activity (pCi/L)	50534	2/15/89	Alpha	<8.60E-01
Alpha Activity (pCi/L)	50542	3/02/89	Alpha	<4.20E-01
Alpha Activity (pCi/L)	50558	3/15/89	Alpha	8.65E-01
Alpha Activity (pCi/L)	50572	3/29/89	Alpha	1.83E+00
Alpha Activity (pCi/L)	50596	4/12/89	Alpha	<5.34E-01
Alpha Activity (pCi/L)	50804	11/28/89	Alpha	7.78E-01
Alpha Activity (pCi/L)	50014	9/11/85	Alpha	9.96E+00
Alpha Activity (pCi/L)	50456	9/16/88	Alpha	1.50E+00
Alpha Activity (pCi/L)	50462	9/23/88	Alpha	2.30E+00
Alpha Activity (pCi/L)	50468	10/10/88	Alpha	1.67E+00
Alpha Activity (pCi/L)	50476	10/24/88	Alpha	1.28E+00
Alpha Activity (pCi/L)	50488	11/04/88	Alpha	9.39E-01

Table B-2. Total Data.
 (sheet 41 of 49)

Constituent	Sample #	Date	Method	Result
Alpha Activity (pCi/L)	50498	11/18/88	Alpha	<2.43E-01
Alpha Activity (pCi/L)	50500	12/02/88	Alpha	<1.83E-01
Alpha Activity (pCi/L)	50532	2/15/89	Alpha	<8.05E-01
Alpha Activity (pCi/L)	50544	3/02/89	Alpha	<2.97E-01
Alpha Activity (pCi/L)	50556	3/15/89	Alpha	<6.22E-01
Alpha Activity (pCi/L)	50570	3/29/89	Alpha	<2.52E-01
Alpha Activity (pCi/L)	50593	4/11/89	Alpha	<1.74E-01
Alpha Activity (pCi/L)	50661	10/09/89	Alpha	5.88E+00
Alpha Activity (pCi/L)	50673	10/11/89	Alpha	1.06E+00
Alpha Activity (pCi/L)	50071	6/19/86	Alpha	5.05E+00
Alpha Activity (pCi/L)	50085	7/07/86	Alpha	2.06E+00
Alpha Activity (pCi/L)	51079	3/21/90	Alpha	<2.89E-01
Beta Activity (pCi/L)	50053	5/31/86	Beta	5.43E+00
Beta Activity (pCi/L)	50113	8/18/86	Beta	6.24E+00
Beta Activity (pCi/L)	50149	10/03/86	Beta	5.21E+00
Beta Activity (pCi/L)	50214	1/06/87	Beta	5.62E+00
Beta Activity (pCi/L)	50454	9/16/88	Beta	1.06E+01
Beta Activity (pCi/L)	50460	9/23/88	Beta	3.32E+00
Beta Activity (pCi/L)	50470	10/10/88	Beta	3.53E+00
Beta Activity (pCi/L)	50478	10/24/88	Beta	<2.11E+00
Beta Activity (pCi/L)	50512	12/16/88	Beta	<1.87E-01
Beta Activity (pCi/L)	50514	12/16/88	Beta	3.74E+00
Beta Activity (pCi/L)	50534	2/15/89	Beta	<1.45E+00
Beta Activity (pCi/L)	50542	3/02/89	Beta	3.78E+00
Beta Activity (pCi/L)	50558	3/15/89	Beta	<7.43E-01
Beta Activity (pCi/L)	50572	3/29/89	Beta	<1.88E+00
Beta Activity (pCi/L)	50596	4/12/89	Beta	<1.26E+00
Beta Activity (pCi/L)	50804	11/28/89	Beta	<1.04E+00
Beta Activity (pCi/L)	50014	9/11/85	Beta	2.86E+01
Beta Activity (pCi/L)	50456	9/16/88	Beta	9.53E+00
Beta Activity (pCi/L)	50462	9/23/88	Beta	<2.31E+00
Beta Activity (pCi/L)	50468	10/10/88	Beta	<9.49E-01
Beta Activity (pCi/L)	50476	10/24/88	Beta	<1.81E+00
Beta Activity (pCi/L)	50500	12/02/88	Beta	<1.38E+00
Beta Activity (pCi/L)	50532	2/15/89	Beta	<1.02E-01
Beta Activity (pCi/L)	50544	3/02/89	Beta	<9.70E-01
Beta Activity (pCi/L)	50556	3/15/89	Beta	<1.42E+00
Beta Activity (pCi/L)	50570	3/29/89	Beta	<1.48E+00
Beta Activity (pCi/L)	50593	4/11/89	Beta	2.52E+00
Beta Activity (pCi/L)	50661	10/09/89	Beta	5.00E+00
Beta Activity (pCi/L)	50673	10/11/89	Beta	<4.72E-01
Beta Activity (pCi/L)	50071	6/19/86	Beta	3.71E+00
Beta Activity (pCi/L)	50085	7/07/86	Beta	2.95E+00
Beta Activity (pCi/L)	51079	3/21/90	Beta	3.88E+00
Conductivity (μ S)	50053	5/31/86	COND-F1d	1.50E+01
Conductivity (μ S)	50113	8/18/86	COND-F1d	1.38E+02

Table B-2. Total Data.
 (sheet 42 of 49)

Constituent	Sample #	Date	Method	Result
Conductivity (μS)	50149	10/03/86	COND-F1d	1.13E+02
Conductivity (μS)	50214	1/06/87	COND-F1d	1.39E+02
Conductivity (μS)	50454	9/16/88	COND-F1d	1.26E+02
Conductivity (μS)	50460	9/23/88	COND-F1d	1.42E+02
Conductivity (μS)	50470	10/10/88	COND-F1d	1.33E+02
Conductivity (μS)	50478	10/24/88	COND-F1d	1.65E+02
Conductivity (μS)	50490	11/04/88	COND-F1d	1.28E+02
Conductivity (μS)	50502	12/02/88	COND-F1d	1.13E+02
Conductivity (μS)	50512	12/16/88	COND-F1d	1.30E+02
Conductivity (μS)	50514	12/16/88	COND-F1d	1.40E+02
Conductivity (μS)	50534	2/15/89	COND-F1d	1.23E+02
Conductivity (μS)	50542	3/02/89	COND-F1d	9.70E+01
Conductivity (μS)	50558	3/15/89	COND-F1d	1.17E+02
Conductivity (μS)	50572	3/29/89	COND-F1d	1.31E+02
Conductivity (μS)	50596	4/12/89	COND-F1d	1.03E+02
Conductivity (μS)	50804	11/28/89	COND-F1d	1.33E+02
Conductivity (μS)	50014	9/11/85	COND-F1d	1.38E+02
Conductivity (μS)	50456	9/16/88	COND-F1d	1.68E+02
Conductivity (μS)	50462	9/23/88	COND-F1d	1.36E+02
Conductivity (μS)	50468	10/10/88	COND-F1d	1.31E+02
Conductivity (μS)	50476	10/24/88	COND-F1d	1.15E+02
Conductivity (μS)	50488	11/04/88	COND-F1d	1.27E+02
Conductivity (μS)	50498	11/18/88	COND-F1d	1.27E+02
Conductivity (μS)	50500	12/02/88	COND-F1d	1.29E+02
Conductivity (μS)	50532	2/15/89	COND-F1d	1.33E+02
Conductivity (μS)	50544	3/02/89	COND-F1d	9.80E+01
Conductivity (μS)	50556	3/15/89	COND-F1d	1.07E+02
Conductivity (μS)	50570	3/29/89	COND-F1d	1.30E+02
Conductivity (μS)	50593	4/11/89	COND-F1d	1.48E+02
Conductivity (μS)	50661	10/09/89	COND-F1d	5.46E+02
Conductivity (μS)	50673	10/11/89	COND-F1d	1.37E+02
Conductivity (μS)	50071	6/19/86	COND-F1d	1.34E+02
Conductivity (μS)	50085	7/07/86	COND-F1d	1.31E+02
Conductivity (μS)	51079	3/21/90	COND-F1d	1.37E+02
Ingitability ($^{\circ}\text{F}$)	50804E	11/28/89	IGNIT	2.12E+02
Ingitability ($^{\circ}\text{F}$)	50661E	10/09/89	IGNIT	2.10E+02
Ingitability ($^{\circ}\text{F}$)	50673E	10/11/89	IGNIT	2.10E+02
Ingitability ($^{\circ}\text{F}$)	51079E	3/21/90	IGNIT	2.06E+02
pH (dimensionless)	50053	5/31/86	PH-F1d	7.24E+00
pH (dimensionless)	50113	8/18/86	PH-F1d	5.95E+00
pH (dimensionless)	50149	10/03/86	PH-F1d	5.72E+00
pH (dimensionless)	50214	1/06/87	PH-F1d	6.42E+00
pH (dimensionless)	50454	9/16/88	PH-F1d	6.34E+00
pH (dimensionless)	50460	9/23/88	PH-F1d	6.23E+00
pH (dimensionless)	50470	10/10/88	PH-F1d	6.35E+00
pH (dimensionless)	50478	10/24/88	PH-F1d	6.01E+00

Table B-2. Total Data.
 (sheet 43 of 49)

Constituent	Sample #	Date	Method	Result
pH (dimensionless)	50490	11/04/88	PH-FId	5.77E+00
pH (dimensionless)	50502	12/02/88	PH-FId	6.18E+00
pH (dimensionless)	50512	12/16/88	PH-FId	6.81E+00
pH (dimensionless)	50514	12/16/88	PH-FId	6.40E+00
pH (dimensionless)	50534	2/15/89	PH-FId	5.91E+00
pH (dimensionless)	50542	3/02/89	PH-FId	6.16E+00
pH (dimensionless)	50558	3/15/89	PH-FId	6.64E+00
pH (dimensionless)	50572	3/29/89	PH-FId	6.30E+00
pH (dimensionless)	50596	4/12/89	PH-FId	6.45E+00
pH (dimensionless)	50804	11/28/89	PH-FId	7.19E+00
pH (dimensionless)	50014	9/11/85	PH-FId	7.60E+00
pH (dimensionless)	50456	9/16/88	PH-FId	6.04E+00
pH (dimensionless)	50462	9/23/88	PH-FId	6.10E+00
pH (dimensionless)	50468	10/10/88	PH-FId	6.04E+00
pH (dimensionless)	50476	10/24/88	PH-FId	5.88E+00
pH (dimensionless)	50488	11/04/88	PH-FId	6.12E+00
pH (dimensionless)	50498	11/18/88	PH-FId	6.49E+00
pH (dimensionless)	50500	12/02/88	PH-FId	7.03E+00
pH (dimensionless)	50532	2/15/89	PH-FId	5.92E+00
pH (dimensionless)	50544	3/02/89	PH-FId	6.33E+00
pH (dimensionless)	50556	3/15/89	PH-FId	6.54E+00
pH (dimensionless)	50570	3/29/89	PH-FId	6.70E+00
pH (dimensionless)	50593	4/11/89	PH-FId	6.20E+00
pH (dimensionless)	50661	10/09/89	PH-FId	6.73E+00
pH (dimensionless)	50673	10/11/89	PH-FId	6.60E+00
pH (dimensionless)	50071	6/19/86	PH-FId	6.45E+00
pH (dimensionless)	50085	7/07/86	PH-FId	6.24E+00
pH (dimensionless)	51079	3/21/90	PH-FId	7.34E+00
Reactivity Cyanide (mg/kg)	50804E	11/28/89	DSPEC	<1.00E+02
Reactivity Cyanide (mg/kg)	50661E	10/09/89	DSPEC	<1.00E+02
Reactivity Cyanide (mg/kg)	50673E	10/11/89	DSPEC	<1.00E+02
Reactivity Cyanide (mg/kg)	51079E	3/21/90	DSPEC	<1.00E+02
Reactivity Sulfide (mg/kg)	50804E	11/28/89	DTITRA	<1.00E+02
Reactivity Sulfide (mg/kg)	50661E	10/09/89	DTITRA	<1.00E+02
Reactivity Sulfide (mg/kg)	50673E	10/11/89	DTITRA	<1.00E+02
Reactivity Sulfide (mg/kg)	51079E	3/21/90	DTITRA	<1.00E+02
Suspended Solids	50558	3/15/89	SSOLID	<5.00E+03
Suspended Solids	50572	3/29/89	SSOLID	<5.00E+03
Suspended Solids	50596	4/12/89	SSOLID	<5.00E+03
Suspended Solids	50804	11/28/89	SSOLID	<5.00E+03
Suspended Solids	50556	3/15/89	SSOLID	<5.00E+03
Suspended Solids	50570	3/29/89	SSOLID	<5.00E+03
Suspended Solids	50593	4/11/89	SSOLID	<5.00E+03
Suspended Solids	50661	10/09/89	SSOLID	<5.00E+03
Suspended Solids	50673	10/11/89	SSOLID	2.20E+04
Suspended Solids	51079	3/21/90	SSOLID	<5.00E+03

Table B-2. Total Data.
 (sheet 44 of 49)

Constituent	Sample #	Date	Method	Result
TDS	50558	3/15/89	TDS	5.75E+04
TDS	50572	3/29/89	TDS	9.50E+04
TDS	50596	4/12/89	TDS	7.60E+04
TDS	50804	11/28/89	TDS	5.90E+04
TDS	50556	3/15/89	TDS	5.95E+04
TDS	50570	3/29/89	TDS	8.25E+04
TDS	50593	4/11/89	TDS	7.75E+04
TDS	50661	10/09/89	TDS	7.80E+04
TDS	50673	10/11/89	TDS	6.20E+04
TDS	51079	3/21/90	TDS	3.40E+04
Temperature (°C)	50053	5/31/86	TEMP-F1d	2.42E+01
Temperature (°C)	50113	8/18/86	TEMP-F1d	2.85E+01
Temperature (°C)	50149	10/03/86	TEMP-F1d	2.37E+01
Temperature (°C)	50214	1/06/87	TEMP-F1d	1.68E+01
Temperature (°C)	50454	9/16/88	TEMP-F1d	1.92E+01
Temperature (°C)	50460	9/23/88	TEMP-F1d	2.40E+01
Temperature (°C)	50470	10/10/88	TEMP-F1d	2.53E+01
Temperature (°C)	50478	10/24/88	TEMP-F1d	2.31E+01
Temperature (°C)	50490	11/04/88	TEMP-F1d	1.92E+01
Temperature (°C)	50502	12/02/88	TEMP-F1d	1.59E+01
Temperature (°C)	50512	12/16/88	TEMP-F1d	1.61E+01
Temperature (°C)	50514	12/16/88	TEMP-F1d	1.84E+01
Temperature (°C)	50534	2/15/89	TEMP-F1d	1.64E+01
Temperature (°C)	50542	3/02/89	TEMP-F1d	4.72E+01
Temperature (°C)	50558	3/15/89	TEMP-F1d	1.70E+01
Temperature (°C)	50572	3/29/89	TEMP-F1d	1.72E+01
Temperature (°C)	50596	4/12/89	TEMP-F1d	2.10E+01
Temperature (°C)	50804	11/28/89	TEMP-F1d	1.50E+01
Temperature (°C)	50014	9/11/85	TEMP-F1d	2.14E+01
Temperature (°C)	50456	9/16/88	TEMP-F1d	1.99E+01
Temperature (°C)	50462	9/23/88	TEMP-F1d	1.99E+01
Temperature (°C)	50468	10/10/88	TEMP-F1d	2.28E+01
Temperature (°C)	50476	10/24/88	TEMP-F1d	2.15E+01
Temperature (°C)	50488	11/04/88	TEMP-F1d	1.99E+01
Temperature (°C)	50498	11/18/88	TEMP-F1d	2.01E+01
Temperature (°C)	50500	12/02/88	TEMP-F1d	2.13E+01
Temperature (°C)	50532	2/15/89	TEMP-F1d	2.00E+01
Temperature (°C)	50544	3/02/89	TEMP-F1d	4.70E+01
Temperature (°C)	50556	3/15/89	TEMP-F1d	1.61E+01
Temperature (°C)	50570	3/29/89	TEMP-F1d	1.64E+01
Temperature (°C)	50593	4/11/89	TEMP-F1d	1.83E+01
Temperature (°C)	50661	10/09/89	TEMP-F1d	2.13E+01
Temperature (°C)	50673	10/11/89	TEMP-F1d	2.26E+01
Temperature (°C)	50071	6/19/86	TEMP-F1d	4.08E+01
Temperature (°C)	50085	7/07/86	TEMP-F1d	2.28E+01
Temperature (°C)	51079	3/21/90	TEMP-F1d	1.73E+01

Table B-2. Total Data.
 (sheet 45 of 49)

Constituent	Sample #	Date	Method	Result
TOC	50053	5/31/86	TOC	2.98E+03
TOC	50113	8/18/86	TOC	3.48E+03
TOC	50149	10/03/86	TOC	2.45E+03
TOC	50214	1/06/87	TOC	<8.77E+02
TOC	50454	9/16/88	TOC	1.30E+03
TOC	50460	9/23/88	TOC	1.20E+03
TOC	50470	10/10/88	TOC	1.90E+03
TOC	50478	10/24/88	TOC	2.00E+03
TOC	50490	11/04/88	TOC	1.20E+03
TOC	50502	12/02/88	TOC	<7.00E+02
TOC	50512	12/16/88	TOC	<8.00E+02
TOC	50514	12/16/88	TOC	1.60E+03
TOC	50534	2/15/89	TOC	<9.00E+02
TOC	50542	3/02/89	TOC	<9.00E+02
TOC	50558	3/15/89	TOC	<9.00E+02
TOC	50572	3/29/89	TOC	<1.80E+03
TOC	50596	4/12/89	TOC	<1.60E+03
TOC	50804	11/28/89	TOC	<1.00E+03
TOC	50014	9/11/85	TOC	<9.80E+02
TOC	50456	9/16/88	TOC	1.20E+03
TOC	50462	9/23/88	TOC	1.30E+03
TOC	50468	10/10/88	TOC	1.00E+03
TOC	50476	10/24/88	TOC	1.00E+03
TOC	50488	11/04/88	TOC	1.10E+03
TOC	50498	11/18/88	TOC	<9.00E+02
TOC	50500	12/02/88	TOC	1.20E+03
TOC	50532	2/15/89	TOC	<8.00E+02
TOC	50544	3/02/89	TOC	<9.00E+02
TOC	50556	3/15/89	TOC	<7.00E+02
TOC	50570	3/29/89	TOC	<1.10E+03
TOC	50593	4/11/89	TOC	<1.40E+03
TOC	50661	10/09/89	TOC	<1.30E+03
TOC	50673	10/11/89	TOC	<1.90E+03
TOC	50071	6/19/86	TOC	3.01E+03
TOC	50085	7/07/86	TOC	1.81E+03
TOC	51079	3/21/90	TOC	1.10E+03
Total Carbon	50804	11/28/89	TC	1.19E+04
Total Carbon	50661	10/09/89	TC	1.30E+04
Total Carbon	50673	10/11/89	TC	1.20E+04
Total Carbon	51079	3/21/90	TC	1.30E+04
TOX (as C1)	50053	5/31/86	TOX	1.75E+02
TOX (as C1)	50113	8/18/86	TOX	1.55E+02
TOX (as C1)	50149	10/03/86	TOX	<1.00E+02
TOX (as C1)	50214	1/06/87	LTOX	8.26E+01
TOX (as C1)	50454	9/16/88	LTOX	9.20E+01
TOX (as C1)	50460	9/23/88	LTOX	9.40E+01

Table B-2. Total Data.
 (sheet 46 of 49)

Constituent	Sample #	Date	Method	Result
TOX (as C1)	50470	10/10/88	LTOX	9.70E+01
TOX (as C1)	50478	10/24/88	LTOX	6.50E+01
TOX (as C1)	50490	11/04/88	LTOX	6.10E+01
TOX (as C1)	50502	12/02/88	LTOX	5.80E+01
TOX (as C1)	50512	12/16/88	LTOX	4.60E+01
TOX (as C1)	50514	12/16/88	LTOX	5.20E+01
TOX (as C1)	50534	2/15/89	LTOX	4.30E+01
TOX (as C1)	50542	3/02/89	LTOX	4.20E+01
TOX (as C1)	50558	3/15/89	LTOX	4.90E+01
TOX (as C1)	50572	3/29/89	LTOX	8.80E+01
TOX (as C1)	50596	4/12/89	LTOX	8.30E+01
TOX (as C1)	50804	11/28/89	LTOX	1.11E+02
TOX (as C1)	50014	9/11/85	TOX	<2.84E+01
TOX (as C1)	50456	9/16/88	LTOX	6.70E+01
TOX (as C1)	50462	9/23/88	LTOX	8.90E+01
TOX (as C1)	50468	10/10/88	LTOX	9.00E+01
TOX (as C1)	50476	10/24/88	LTOX	6.00E+01
TOX (as C1)	50488	11/04/88	LTOX	8.10E+01
TOX (as C1)	50498	11/18/88	LTOX	8.20E+01
TOX (as C1)	50500	12/02/88	LTOX	5.60E+01
TOX (as C1)	50532	2/15/89	LTOX	4.00E+01
TOX (as C1)	50544	3/02/89	LTOX	4.20E+01
TOX (as C1)	50556	3/15/89	LTOX	5.50E+01
TOX (as C1)	50570	3/29/89	LTOX	8.20E+01
TOX (as C1)	50593	4/11/89	LTOX	8.40E+01
TOX (as C1)	50661	10/09/89	LTOX	1.27E+02
TOX (as C1)	50673	10/11/89	LTOX	1.33E+02
TOX (as C1)	50071	6/19/86	TOX	<2.63E+01
TOX (as C1)	50085	7/07/86	TOX	<1.44E+01
TOX (as C1)	51079	3/21/90	LTOX	8.40E+01
²⁴¹ Am (pCi/L)	50804	11/28/89	AEA	3.96E-02
²⁴¹ Am (pCi/L)	50661	10/09/89	AEA	2.95E+00
²⁴¹ Am (pCi/L)	50673	10/11/89	AEA	7.96E-02
²⁴¹ Am (pCi/L)	51079	3/21/90	AEA	7.44E-02
¹⁴ C (pCi/L)	50804	11/28/89	LSC	5.59E+00
¹⁴ C (pCi/L)	50661	10/09/89	LSC	<1.49E+00
¹⁴ C (pCi/L)	50673	10/11/89	LSC	<1.80E+00
¹⁴ C (pCi/L)	51079	3/21/90	LSC	<1.55E+00
³ H (pCi/L)	50661	10/09/89	LSC	2.90E+02
³ H (pCi/L)	50673	10/11/89	LSC	<9.74E+01
³ H (pCi/L)	51079	3/21/90	LSC	<1.37E+02
²³⁸ Pu (pCi/L)	50804	11/28/89	AEA	4.17E-03
²³⁸ Pu (pCi/L)	50661	10/09/89	AEA	4.31E-02
²³⁸ Pu (pCi/L)	50673	10/11/89	AEA	1.53E-02
²³⁸ Pu (pCi/L)	51079	3/21/90	AEA	<1.75E-03
^{239, 240} Pu (pCi/L)	50804	11/28/89	AEA	2.79E-02

Table B-2. Total Data.
 (sheet 47 of 49)

Constituent	Sample #	Date	Method	Result
$^{239}_{\alpha}$, ^{240}Pu (pCi/L)	50661	10/09/89	AEA	7.42E-01
$^{239}_{\alpha}$, ^{240}Pu (pCi/L)	50673	10/11/89	AEA	7.70E-02
$^{239}_{\alpha}$, ^{240}Pu (pCi/L)	51079	3/21/90	AEA	3.78E-02
Radium Total (pCi/L)	50804	11/28/89	Alpha-Ra	1.74E-01
Radium Total (pCi/L)	50661	10/09/89	Alpha-Ra	<1.05E-01
Radium Total (pCi/L)	51079	3/21/90	Alpha-Ra	<4.54E-03
^{90}Sr (pCi/L)	50804	11/28/89	Beta	<9.50E-02
^{90}Sr (pCi/L)	50661	10/09/89	Beta	2.93E-01
^{90}Sr (pCi/L)	50673	10/11/89	Beta	<7.30E-03
^{90}Sr (pCi/L)	51079	3/21/90	Beta	<9.93E-02
^{234}U (pCi/L)	50804	11/28/89	AEA	1.14E-01
^{234}U (pCi/L)	50661	10/09/89	AEA	9.08E-02
^{234}U (pCi/L)	50673	10/11/89	AEA	6.20E-02
^{234}U (pCi/L)	51079	3/21/90	AEA	1.55E-01
^{238}U (pCi/L)	50804	11/28/89	AEA	8.90E-02
^{238}U (pCi/L)	50661	10/09/89	AEA	1.28E-01
^{238}U (pCi/L)	50673	10/11/89	AEA	5.97E-02
^{238}U (pCi/L)	51079	3/21/90	AEA	1.30E-01

NOTES:

Sample# is the number of the sample. See chapter three for corresponding chain-of-custody number.

Date is the sampling date.

Results are in ppb (parts per billion) unless otherwise indicated.

The following table lists the methods that are coded in the method column.

Code	Analytical Method	Reference
ABN	Semivolatile Organics (GC/MS)	USEPA-8270
AEA	^{241}Am	UST-20Am01
AEA	Curium Isotopes	UST-20Am/Cm01
AEA	Plutonium Isotopes	UST-20Pu01
AEA	Uranium Isotopes	UST-20U01
ALPHA	Alpha Counting	EPA-680/4-75/1
ALPHA-Ra	Total Radium Alpha Counting	ASTM-D2460
BETA	Beta Counting	EPA-680/4-75/1
BETA	^{90}Sr	UST-20Sr02
COLIF	Coliform Bacteria	USEPA-9131
COLIFMF	Coliform Bacteria (Membrane Filter)	USEPA-9132
COND-Fld	Conductivity-Field	ASTM-D1125A
COND-Lab	Conductivity-Laboratory	ASTM-D1125A
CVAA	Mercury	USEPA-7470
CVAA/M	Mercury-Mixed Matrix	USEPA-7470
DIGC	Direct Aqueous Injection (GC)	UST-70DIGC
DIMS	Direct Aqueous Injection (GC/MS)	"USEPA-8240"

Table B-2. Total Data.
 (sheet 48 of 49)

Code	Analytical Method	Reference
DSPEC	Reactive Cyanide (Distillation, Spectroscopy)	USEPA-CHAPTER 7
DTITRA	Reactive Sulfide (Distillation, Titration)	USEPA-CHAPTER 7
FLUOR	Uranium (Fluorometry)	ASTM-D2907-83
GEA	Gamma Energy Analysis Spectroscopy	ASTM-D3649-85
GFAA	Arsenic (AA, Furnace Technique)	USEPA-7060
GFAA	Lead (AA, Furnace Technique)	USEPA-7421
GFAA	Selenium (AA, Furnace Technique)	USEPA-7740
GFAA	Thallium (AA, Furnace Technique)	USEPA-7841
IC	Ion Chromatography	EPA-600/4-84-01
ICP	Atomic Emission Spectroscopy (ICP)	USEPA-6010
ICP/M	Atomic Emission Spectroscopy (ICP)-Mixed Matrix	USEPA-6010
IGNIT	Pensky-Martens Closed-Cup Ignitability	USEPA-1010
ISE	Fluoride-Low Detection Limit	ASTM-D1179-80-B
ISE	Ammonium Ion	ASTM-D1426-D
LALPHA	Alpha Activity-Low Detection Limit	EPA-680/4-75/1
LEPD	^{129}I	UST-20I02
LSC	^{14}C	UST-20C01
LSC	Tritium	UST-20H03
LTOX	Total Organic Halides-Low Detection Limit	USEPA-9020
PH-Fld	pH-Field	USEPA-9040
PH-Lab	pH-Laboratory	USEPA-9040
SPEC	Total and Amenable Cyanide (Spectroscopy)	USEPA-9010
SPEC	Hydrazine-Low Detection Limit (Spectroscopy)	ASTM-D1385
SSOLID	Suspended Solids	SM-208D
TC	Total Carbon	USEPA-9060
TDS	Total Dissolved Solids	SM-208B
TEMP-Fld	Temperature-Field	Local
TITRA	Alkalinity-Method B (Titration)	ASTM-D1067B
TITRA	Sulfides (Titration)	USEPA-9030
TOC	Total Organic Carbon	USEPA-9060
TOX	Total Organic Halides	USEPA-9020
VOA	Volatile Organics (GC/MS)	USEPA-8240

Analytical Method Acronyms:

atomic absorption spectroscopy (AA)
 gas chromatography (GC)
 mass spectrometry (MS)
 inductively-coupled plasma spectroscopy (ICP)

References:

- ASTM - "1986 Annual Book of ASTM Standards", American Society for Testing and Materials, Philadelphia, Pennsylvania.
 EPA - Various methods of the U.S. Environmental Protection Agency, Washington, D.C.

Table B-2. Total Data.
(sheet 49 of 49)

- UST - Methods of the United States Testing Company, Incorporated,
Richland, Washington.
- SM - "Standard Methods for the Examination of Water and
Wastewater", 16th ed., American Public Health Association,
American Water Works Association and Water Pollution Control
Federation, Washington, D.C.
- USEPA- "Test Methods for Evaluating Solid Waste Physical/Chemical
Methods", 3rd ed., SW-846, U.S. Environmental Protection
Agency, Washington, D.C.

Table B-3. Summary of 200 West Area Raw Water and Sanitary Water Data.
(sheet 1 of 2)

Constituent/Parameter [all ppb, exceptions noted]	Raw Water ^a (1986-1987)			Sanitary Water ^b (1985-1988)			2724-W Laundry Sanitary Water ^c (1989)		
	N ^d	AVG	STD DEV	N	AVG	STD DEV	N	AVG	STD DEV
Alkalinity (Method B)				4	5.45E+04	5.78E+02			
Aluminum	5	1.78E+02	6.31E+01	4	<5.00E+00	NA			
Arsenic				4	*1.15E+02	1.91E+01	4	<5.00E+02	NA
Arsenic (EP Toxic)				4	<1.00E+03	NA	4	2.90E+01	1.41E+00
Barium	5	2.94E+01	1.52E+00	4	1.77E+01	1.00E+01	4	<1.00E+02	NA
Barium (EP Toxic)				4	<5.00E-01	NA	4	1.87E+04	2.94E+02
Boron				4	<1.00E+01	NA	4	1.45E+02	1.60E+01
Cadmium				4	*6.25E+00	2.50E+00	4	<5.00E+02	NA
Cadmium (EP Toxic)				4	<5.00E+01	NA	4	2.35E+03	8.66E+02
Calcium	5	1.76E+04	2.71E+03	4	<1.00E+01	NA	4	2.92E+03	1.71E+02
Chromium				4	*2.50E+02	2.68E+02	4	2.11E+02	2.00E+00
Chromium (EP Toxic)				4	<1.00E+01	NA	4	3.27E+01	3.40E+00
Chloride	5	8.25E+02	1.99E+02	4	*1.08E+02	1.50E+01	4	1.28E+02	8.68E+00
Conductivity-field (μS)	5	9.40E+01	4.65E+01	4	<5.00E+00	NA	4	<5.00E+02	NA
Copper	5	1.52E+01	7.96E+00	4	<5.00E+01	NA	4	4.35E+03	1.59E+02
Color (units)				4	*6.25E+00	2.50E+00	4	<5.00E+02	NA
Ignitability (deg F)				4	<5.00E+00	NA	4	2.11E+02	2.00E+00
Iron	5	1.14E+02	1.44E+02	4	*2.50E+02	2.68E+02	4	3.27E+01	3.40E+00
Fluoride	1	9.30E+01	NA	4	<5.00E+00	NA	4	1.28E+02	8.68E+00
Lead	3	8.13E+00	5.42E+00	4	<5.00E+00	NA	4	<5.00E+02	NA
Lead (EP Toxic)				4	<5.00E+00	NA	4	<5.00E+02	NA
Magnesium	5	4.12E+03	5.41E+02	4	<1.00E+01	NA	4	5.00E+02	0.00E+00
Manganese	5	1.68E+01	1.99E+01	4	<5.00E-01	NA	4	7.10E+00	3.40E-01
Mercury				4	<5.00E-01	NA	4	7.28E+02	5.44E+01
Mercury (EP Toxic)				4	*8.50E+01	4.12E+01	4	<2.00E+01	NA
Nitrate (as N)				4	<5.00E+00	NA	4	<5.00E+02	NA
pH (dimensionless)				4	<5.00E+00	NA	4	<1.00E+02	NA
Potassium	5	6.52E+00	1.04E+00	4	<5.00E+00	NA	4	<1.00E+02	NA
Reactivity Cyanide (mg/kg)				4	<5.00E+00	NA	4	<5.00E+02	NA
Reactivity Sulfide (mg/kg)				4	<1.00E+01	NA	4	2.14E+03	1.02E+01
Selenium				4	<5.00E+00	NA	4	1.00E+01	0.00E+00
Selenium (EP Toxic)				4	<1.00E+01	NA	4	<5.00E+02	NA
Silicon				4	<5.00E+00	NA			
Silver				4	<1.00E+01	NA			
Silver (EP Toxic)				4	<5.00E+02	NA			

Table B-3. Summary of 200 West Area Raw Water and Sanitary Water Data.
(sheet 2 of 2)

Constituent/Parameter [all ppb, exceptions noted]	Raw Water ^a (1986-1987)			Sanitary Water ^b (1985-1988)			2724-W Laundry Sanitary Water ^c (1989)		
	N ^d	AVG	STD DEV	N	AVG	STD DEV	N	AVG	STD DEV
Sodium	5	2.23E+03	9.28E+01	4	2.20E+03	1.15E+02	4	2.05E+03	1.28E+02
Strontium							4	9.47E+01	3.00E+00
Sulfate	5	9.83E+03	1.40E+03	4	1.47E+04	1.16E+03	4	1.40E+04	4.44E+02
Sulfide	5	1.00E+03	8.63E-05						
Temperature-field (C)	5	1.48E+01	6.80E+00				4	1.31E+01	7.40E+00
Total Carbon							4	1.51E+04	1.71E+02
TOC	5	1.61E+03	4.76E+02				4	1.42E+02	1.30E+01
TOX (µg (Cl)/L)	4	1.44E+01	8.30E+00				4	5.37E+04	3.06E+04
TDS							4	2.82E+01	7.94E+00
Trichloromethane							3	2.54E-01	9.46E-02
Uranium	5	5.21E-01	1.80E-01				4	5.85E+01	3.12E+01
Zinc	5	7.60E+00	8.94E-01	4	*1.03E+02	4.50E+01			
Alpha Activity	5	2.34E+00	3.49E+00						
Beta Activity	5	1.05E+01	1.47E+01				3	4.33E+00	3.86E+00

NOTES: Averages denoted by an asterisk include a mix of above- and below-detection limit in computations when the actual values are below the detection limit.

See companion table for inorganic detection limits as compiled from Hanford Environmental Health Foundation.

^aCompiled from "Substance Toxicity Evaluation of Waste Data Base" provided by F. M. Jungfleisch (this data is an update of the data presented in WHC 1988, *Preliminary Evaluation of Hanford Liquid Discharges*), Westinghouse Hanford Company, Richland, Washington.

^bCompiled from HEHF, 1986, *Hanford Sanitary Water Quality Surveillance, CY 1985*, HEHF-55, Hanford Environmental Health Foundation, Environmental Health Sciences, Richland, Washington; HEHF-59; HEHF-71; and HEHF-74 (corresponding reports for CY 1986, 1987, and 1988).

^cData are from sampling campaign conducted October 1, 1989, to March 30, 1990, in support of Stream Specific Reports.

^dN is defined as the number of test results available for a particular analyte; N may reflect both single and multiple data sets.

ppb = parts per billion.

TOC = total organic carbon.

TOX = total organic halides.

µS = microsiemen.

µg = microgram.

This page intentionally left blank.